

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

BOULDER LICENSING LLC,

Plaintiff,

v.

CINEMARK, INC., CINEMARK
HOLDINGS, INC., and CINEMARK USA,
INC.,

Defendants.

Case No. 6:21-cv-01114

Jury Trial Demanded

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Boulder licensing LLC (“Boulder”) files this Complaint against Cinemark, Inc., Cinemark Holdings, Inc., and Cinemark USA, Inc. (individually and collectively referred to herein as “Cinemark”) for patent infringement of United States Patent Nos. 6,829,033; 8,395,751; 8,493,544; and 9,002,017 (the “patents-in-suit”) and alleges as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.*

THE PARTIES

2. Boulder is a limited liability company organized under laws of the State of Texas with its principal place of business at 10900 Research Blvd, Suite 160C, PMB 1219, Austin, TX 78759.

3. On information and belief, Cinemark, Inc. is a corporation organized and existing under the laws of the State of Delaware, having its principal place of business at 3900 Dallas Parkway, Suite 500, Plano, Texas 75093.

4. On information and belief, Cinemark, Inc. may be served through its registered agent, Corporation Service Company, located at 251 Little Falls Drive, Wilmington, Delaware, 19808

5. On information and belief, Cinemark Holdings, Inc. is a corporation organized and existing under the laws of the State of Delaware, having its principal place of business at 3900 Dallas Parkway, Suite 500, Plano, Texas 75093.

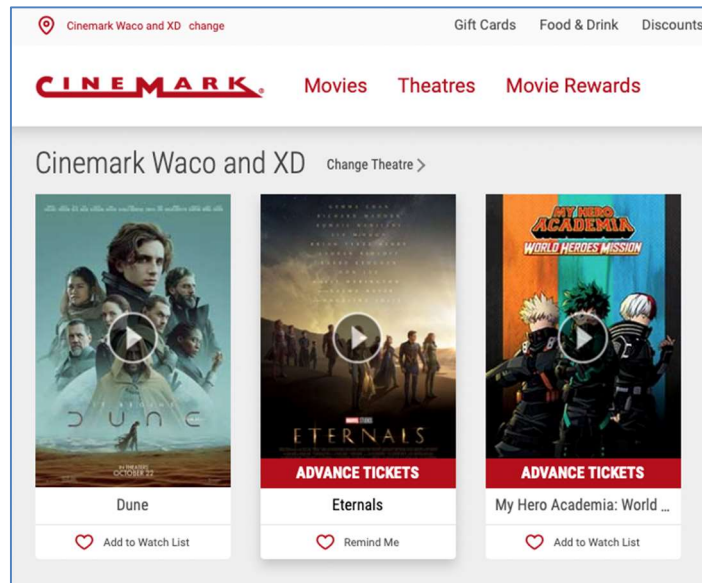
6. On information and belief, Cinemark Holdings, Inc. may be served through its registered agent, Corporation Service Company, located at 251 Little Falls Drive, Wilmington, Delaware, 19808.

7. On information and belief, Cinemark USA, Inc. is a corporation organized and existing under the laws of the State of Texas, having its principal place of business at 3900 Dallas Parkway, Suite 500, Plano, Texas 75093.

8. On information and belief, Cinemark USA, Inc. may be served through its registered agent, Corporation Service Company D/B/ A+8, located at 211 E. 7th Street, Suite 620, Austin, Texas 78701.

9. On information and belief, on or about December 2009, Cinemark, Inc. was merged into Cinemark Holdings, Inc., and Cinemark Holdings, Inc. became the holding company of Cinemark USA, Inc.

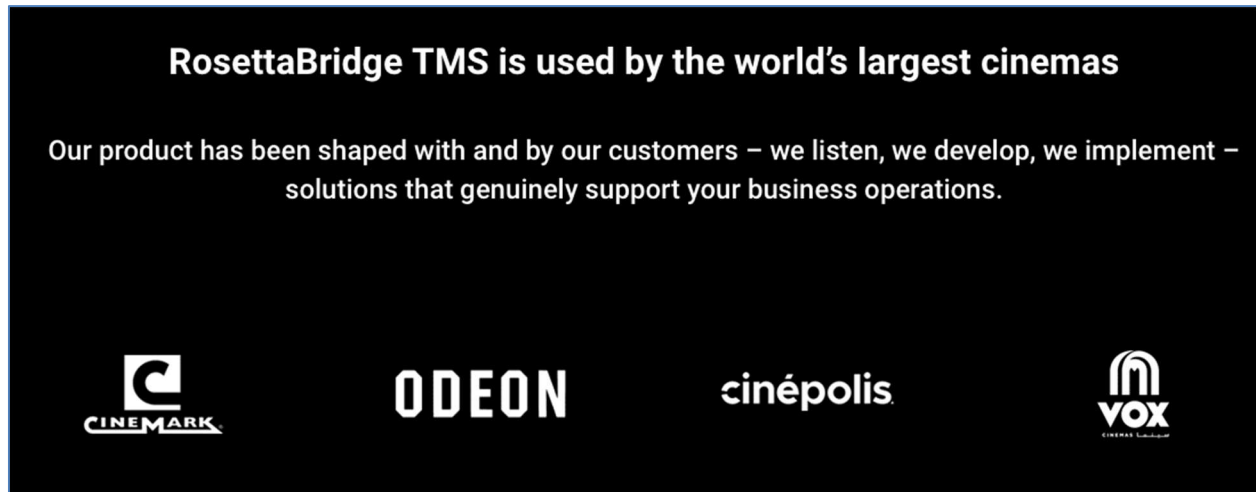
10. On information and belief, Cinemark, directly or indirectly, uses the accused infringing methods, products, and services in the United States, the State of Texas, and this judicial district, including in the movie theater locations it directly or indirectly owns and/or operates.



See e.g., <https://www.cinemark.com/theatres/tx-waco/cinemark-waco-and-xd>.

11. On information and belief, Cinemark has directly or indirectly used, and continues to use, an accused software product known as RosettaBridge Theater

Management System TMS, (hereinafter referred to as “RBTMS”).¹ More specifically, on information and belief, Cinemark uses RBTMS in this judicial district.



See e.g., <https://uniquex.com/rosettabridge-theater-management-system/>.

12. On information and belief, on or about June 9, 2018, Cinemark reached an agreement with Unique X to deploy RBTMS.² On information and belief, as of on or about June 9, 2018, it was the intention of Cinemark that “[b]eginning in September 2018, three of Unique X’s d-cinema solutions [would] be rolled out to Cinemark’s 4,566 screens across the United States, including [RBTMS], RosettaNet eTMS network management system and Smart Trailing, the centralized trailer scheduling and delivery system.”³ On information and belief, Cinemark’s intention to deploy RBTMS

¹ See <https://uniquex.com/rosettabridge-theater-management-system/>.

² See <https://uniquex.com/cinemark-selects-deployment-of-rosettabridge-tms/>.

³ See <https://uniquex.com/cinemark-selects-deployment-of-rosettabridge-tms/>.

to all of Cinemark's movie theater locations has been, in whole or in part, realized through Cinemark's, direct or indirect, efforts to roll out the RBTMS software across its approximately 523 domestically-based movie theaters, including specifically Cinemark's domestically-based movie theaters which are located in this judicial district.⁴

13. On information and belief, Cinemark uses RBTMS, alone or in combination with other software "to automate and centrally manage its entire theatre portfolio."⁵

14. On information and belief, Cinemark uses BaseKey⁶ software in support of its movie theaters, including those movie theaters located in this judicial district.

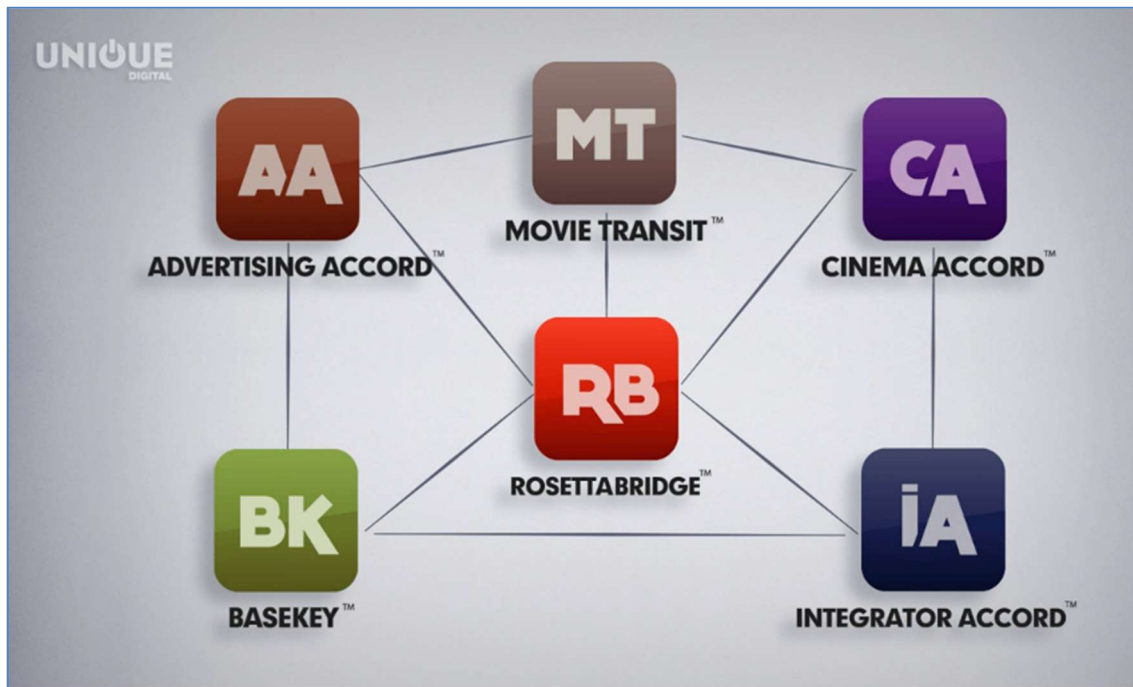


⁴ See <https://uniquex.com/unique-x-launches-smarttrailer-upgrade/>. See also <https://www.cinemark.com/about-cinemark/about-us>.

⁵ See <https://uniquex.com/cinemark-selects-deployment-of-rosettabridge-tms/>.

⁶ See <https://uniquex.com/basekey-kdm/>.

See e.g., <https://uniquex.com/basekey-kdm/>.



See e.g., <https://vimeo.com/44104010>.

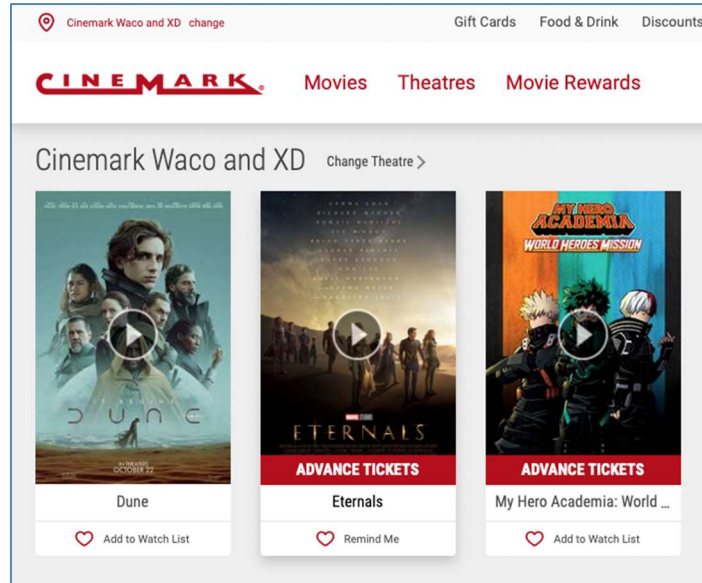
JURISDICTION AND VENUE

15. Boulder repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

16. Cinemark is subject to this Court's personal jurisdiction, in accordance with due process and/or the Texas Long Arm Statute because, in part, Cinemark "[r]ecruits Texas residents, directly or through an intermediary located in this State, for employment inside or outside this State." See Tex. Civ. Prac. & Rem. Code § 17.042.

17. This Court has personal jurisdiction over Cinemark because it committed and continues to commit acts of infringement in this judicial district in violation of 35 U.S.C. §§ 271(a) and (b). For example, on information and belief, Cinemark has used the

infringing RBTMS software, including specifically in the movie theaters that it operates directly or indirectly in this judicial district.



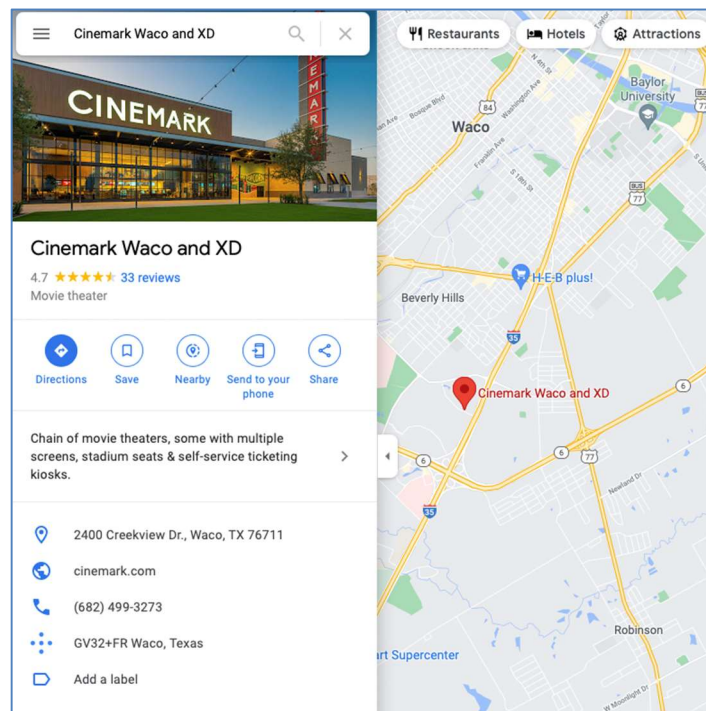
See e.g., <https://www.cinemark.com/theatres/tx-waco/cinemark-waco-and-xd>.

18. On information and belief, Cinemark is subject to the Court's jurisdiction because it regularly conducts and solicits business, or otherwise engages in other persistent courses of conduct in this district, and/or derives substantial revenue from the sale and distribution of goods and services provided to individuals and businesses in this district.

19. This Court has personal jurisdiction over Cinemark because, *inter alia*, Cinemark, on information and belief: (1) has committed acts of patent infringement in this judicial district; (2) has substantial, continuous, and systematic contacts with this State and this judicial district; (3) owns, manages, and operates facilities in this State and this judicial district; (4) enjoys substantial income from its operations and sales in

this State and this judicial district; (5) employs Texas residents in this State and this judicial district, and (6) solicits business and markets products, systems and/or services in this State and judicial district including, without limitation, the infringing RBTMS software product.

20. Venue is proper pursuant to 28 U.S.C. §§ 1391(b), (c), (d) and/or 1400(b), at least because Cinemark, has committed acts of infringement in this district, and has a regular and established place of business in this district, located at 2400 Creekview Dr., Waco, TX 76711.



United States Patent No. 6,829,033

21. On December 7, 2004, the United States Patent and Trademark Office (“USPTO”) duly and legally issued United States Patent No. 6,829,033 (“the ‘033 patent”) entitled “Presentation Scheduling in Digital Cinema System.”

22. The ‘033 patent is presumed valid under 35 U.S.C. § 282.

23. Boulder owns all rights, title, and interest in the ‘033 patent.

24. On information and belief, Boulder has not granted Cinemark an approval, an authorization, or a license to the rights under the ‘033 patent.

25. The ‘033 patent relates to, among other things, the scheduling of digital movie theater presentation operations.

26. The claimed invention(s) of the ‘033 patent sought to solve problems with the evolution of the movie theater industry as it moved away from the distribution of celluloid film to digitized solutions. For example, the ‘033 patent states:

Video compression is a key factor of multimedia. An effective digital compression can reduce the cost as well as increase the quality of video displayed over any digital communication. One application of the video compression technique is in the motion picture industry.

In the traditional motion picture industry, theatre operators receive reels of celluloid film from a studio or through a distributor for eventual presentation in a theatre auditorium. The reels of film include the feature program (a full-length motion picture) and a plurality of previews and other promotional material, often referred to as trailers. The theatre operator may also be required or choose to present some of its own trailers, often comprising of local promotional and advertising material. A two hour motion picture plus five minutes of trailers, for example, generates approximately 11,250 feet of celluloid film. As a result, theatre operators may receive a two hour movie that is divided into five or six reels.

One way to present the multiple reels of film is to use two projectors. One projector is threaded with the first reel and the other projector with the second reel. The theatre operator starts the film on the first projector. At an appropriate time for a changeover, the theatre operator starts the second projector and stops the first projector. While the second reel is rolling, the theatre operator removes the first reel and threads a third reel on the first projector. This swapping continues throughout the presentation. Therefore, the theatre operator must monitor each presentation in each auditorium for the changeovers.

Alternatively, a device called a platter is also used in theatres. A platter may consist of two or more large discs of approximately four or five feet in diameter that are stacked vertically about one to two feet apart. The discs are large enough to hold one large spool of film, which the theatre operator assembles by splicing together all of the lengths of film from the different reels. Splicing is the process of cutting the end of one strip of film so that it carefully matches up to the beginning of the next strip of film, and then taping the strips together. This allows the theatre operator to show the entire presentation without changeovers.

Therefore, a theatre operator builds a “platter” by sequencing reels of celluloid film in the order in which it is to be presented, and physically splicing together the film to be played by the projector. A theatre operator may also insert cues and milestones onto celluloid film by physically attaching trigger strips onto the film. Cues may be attached in between programming, or within a particular feature or trailer. Currently, a theatre operator controls auditorium environment through the use of theatre automation systems. Theatre automation systems control such functions as turning lights on and off, opening and closing curtains, and changing the projector lens. Theatre automation systems control these functions by reading a trigger strip physically placed onto the film as the film passes through a reader connected to the theatre automation system. Trigger strips are typically metallic or optical pieces of tape adhered onto the film. When the tape passes under the reader, an electrical signal is output to the theatre automation system.

Along with reels of films comprising features and trailers, the theatre operator receives one or more soundtracks to be played with each film. Soundtracks come in a variety of languages and sound formats. Sound formats, such as stereo, 7.1, or 5.1, refer to the number of channels the sound format requires. Because sound systems vary greatly from theatre to theatre, the studio or distributor typically ship multiple soundtracks for a given film.

Moreover, trailers and features each have associated ratings, which define the appropriateness of the material for a given audience. In the United States, ratings are labeled to motion pictures and trailers by the Motion Picture Association of America (MPAA). However, different jurisdictions have different ratings systems, and not all jurisdictions are consistent as to the rating level of a given program. Accordingly, a theatre operator in a given jurisdiction need be conscious of the types of programs he plans to display together.

Therefore, when a theatre operator is building a platter, the operator must be careful to ensure that the platter is created accurately. For example, each image program should have the appropriate soundtrack loaded, in terms of language and sound format. Moreover, the image programs on the platter should have the appropriate ratings. That is, one wants to ensure that an “R” rated trailer is not displayed with a “G” rated movie. Further, cues must be inserted in the proper places and the correct lens needs to be attached to the projector in order for viewing at the proper display aspect ratio. However, human error is inevitable and all too frequent.

An evolution of the film industry is occurring as the industry moves from celluloid film to digitized image and audio programs. However, theatres are not equipped to process digital programming to create and schedule “digital platters.”

See '033 Specification at col. 1, l. 17 – col. 2, l. 45.

27. The '033 patent then states:

Advances in digital technology have led to a distribution concept whereby presentation material is electronically stored

in a digitized format. Digitized images may be distributed on various storage mediums such as magnetic media or compact optical discs, and/or transmitted over wired, fiber optic, wireless, or satellite communication systems.

To reduce the data rate requirement for the storage and/or transmission of high quality electronic images, compression algorithms are being developed. For example, absolute discrete cosine transform (ABSDCT) allows significant compression while preserving the quality of image signals. ABSDCT is disclosed in U.S. Pat. No. 5,021,891, entitled "Adaptive Block Size Image Compression Method And System," assigned to the assignee of the present invention and incorporated herein by reference. DCT techniques are also disclosed in U.S. Pat. No. 5,107,345, entitled "Adaptive Block Size Image Compression Method And System," assigned to the assignee of the present invention. Further, the use of the ABSDCT technique in combination with a Discrete Quadtree Transform technique is discussed in U.S. Pat. No. 5,452,104, entitled "Adaptive Block Size Image Compression Method And System," also assigned to the assignee of the present invention.

Technologies such as ABSDCT offer the possibility of a "digital cinema" system. Generally defined, digital cinema refers to the electronic distribution and display of high quality film programming which has been converted to a digital electronic representation for storage, transmission, and display purposes. A digital cinema system would overcome many of the limitations of the current film distribution process. A digital system would not be subject to the quality degradation over time experienced by celluloid film. Further, a digital system may eliminate the theft and illegal duplication of films by allowing implementation of security measures within the digital system itself. Moreover, distribution of film information using a digital electronic format actually increases the potential for rapid, low-cost duplication without quality degradation.

With the advent of digital cinema systems, full-length motion pictures, trailers, advertisements and other audio/image "cinema-quality" programs are delivered to theatres throughout the world using digital technology. Authorized theatres receive the digitized programs and store them, typically while still compressed. At each showing, the digitized information is retrieved via a local area network from the

storage medium, then is decrypted if necessary, decompressed and displayed using cinema-quality electronic projectors featuring high quality digital sound.

See '033 Specification at col. 2, l. 48 – col. 3, l. 29.

28. The '033 patent then also states:

In one embodiment, a presentation system comprises a theatre manager configured to control presentation and a scheduler configured to allow assignment of one playlist for presentation. The scheduler is also configured to allow assignment of one or more playlists for presentation by generating a schedule. The scheduler may be implemented in the theatre manager. The presentation system may further comprise a decoding module configured to prepare contents of each assigned playlist for playback. The decoding module may check the schedule and control playback of the contents of each playlist based on the schedule. Alternatively, the decoding modules may check the schedule and cue a user to control playback of the contents of each assigned playlist.

In another embodiment, a method for presentation comprises generating a schedule to assign one or more playlists for presentation and controlling presentation of the assigned one or more playlists based on the schedule. In still another embodiment, a presentation system comprises means for assigning a single playlist for presentation and means for generating a schedule to assign one or more playlists for presentation.

In the above embodiments, a message indicating a change in the schedule may be sent if a change is made in the schedule. Also, a verification that the digital cinema system has resources to present each assigned playlist can be performed when generating the schedule. The verification may be performed by the scheduler or the decoding module. Moreover, generation of the schedule may comprise designating a playlist as a repeating playlist and/or designating a playlist as an intermission playlist. The intermission playlist may either be assigned and presented between a predetermined two assigned playlists or be presented between each assigned playlist.

In a further, a method for generating a schedule comprises displaying a list of playlists, assigning one or more playlists for presentation based on the list and generating a schedule based on the assigned one or more playlists. The method may further comprise verifying that the digital cinema system has resources to present each playlist assigned in the schedule when generating the schedule, and rejecting assignment of a playlist in the schedule if the digital cinema does not have the resource. Also, the method may comprise either one or a combination of checking that each image program needed to present each playlist exists, checking that each audio program needed to present each playlist exists, checking that no security conflict exists, checking that no time conflicts are created and checking that there is no resource conflicts. The method may further comprise specifying a presentation start date of each selected playlist, specifying a presentation end date of each selected playlist, specifying the start time for one day, and/or replicating the start time across multiple days, starting on a presentation start date and ending on a presentation end date, if a presentation end date that is later than a presentation start date.

In yet a further embodiment, a method for decoding programs for presentation comprises checking a schedule to determine if there is a schedule entry for presentation, the schedule entry being comprised of one or more programs, and initiating playback of the schedule entry according to the schedule by appropriately decoding each program of the schedule entry. Checking the schedule comprises determining a next schedule entry for presentation.

Initiating playback comprises initiating playback of the next schedule entry according to the time it is scheduled to start. Here, determining the next schedule entry comprises determining the next schedule entry as the earliest schedule entry whose start time is equal to or greater than a current time. Also, a user may be cued to control the playback of the next schedule entry. Here, determining the next schedule entry comprise locating a current schedule entry and determining an entry following the current schedule entry to be the next schedule entry; and otherwise determining the next schedule entry as the earliest schedule entry whose start time is equal to or greater than a current time.

In yet another embodiment, a decoding system for decoding programs comprises three states, an intermission state, a paused state and a running state. The decoding system comprises starting presentation of a currently scheduled playlist from the beginning of the playlist when a start command is received, if the decoding system is in an intermission state; starting presentation of the currently scheduled playlist from approximately the point the playlist was stopped when a start command is received, if the decoding system is in a paused state; entering the paused state when a stop command is received before completing the presentation of the playlist; and entering the intermission state either if a cancel command is received or if the presentation of the playlist is completed.

The system may comprise a decoding module with a user interface. Alternatively, the system may comprise a theatre manager having a user interface. The user interface may comprise either one or a combination of a visual indicator that signifies that the decoding system is online, a visual indicator that signifies that the decoding system is currently processing a playlist and a visual indicator that signifies that the decoding system is in the paused state. The user interface may also comprise either one or a combination of means for receiving the start command, means for receiving the pause command and means for receiving the cancel command.

See '033 Specification at col. 3, l. 30 – col. 4, l. 62.

29. The invention(s) claimed in the '033 patent solves various technological problems associated with the development of scheduling systems for digital movie theaters and enables such systems to, among other things, (1) to control the presentation of movie theater AV via scheduling system that is adapted to digitally stored content; (2) allow for the improved and simplified management of movie theater control systems, and (3) simplifying the management of security controls related to movie theater digital content.

United States Patent No. 8,395,751

30. On March 12, 2013 the “USPTO” duly and legally issued United States Patent No. 8,395,751 (“the ‘751 patent”) entitled “Method and Apparatus for Pre-Firing Cues During a Digital Cinema Presentation.”

31. The ‘751 patent is presumed valid under 35 U.S.C. § 282.

32. Boulder owns all rights, title, and interest in the ‘751 patent.

33. On information and belief, Boulder has not granted Cinemark an approval, an authorization, or a license to the rights under the ‘751 patent.

34. The ‘751 patent relates to, among other things, the automated scheduling of digital movie theater presentation operations.

35. The claimed invention(s) of the ‘751 patent sought to solve problems related to movie theater management systems. For example, the ‘751 patent states:

During the exhibition of a motion picture in a movie theater, certain activities occur. For example, in advance of the actual presentation, a curtain covering the screen will draw open and the house lights dim. In the past, theater personnel performed these activities manually. Today, many movie theaters make use of a Screen Automation System (SAS) for performing such tasks. In the case of a conventional celluloid film print, a projectionist or other theater personnel will typically affix a piece of metal foil to the film print such that at a particular time during the exhibition of the film, the foil will pass by a reader. The passage of the metal foil past the reader gives rise to a signal the triggers the SAS to initiate a particular activity, such as dimming the lights or actuating the curtain.

In the case of the presentation of digital cinema content, a different mechanism exists for triggering the theater SAS. A typical digital cinema presentation incorporates a “show playlist” which, as defined in the National Association of

Theater Owners *Digital Cinema System Requirements*, document (Release 1.0 2006) (<http://www.natoonline.org/NATO%20Digital%20Cinema%20System%20Requirements%20-%20release%201-02.pdf>) comprises a list of time-sequenced compositions, each having a corresponding Composition Playlist (CPL) and automation cues interlaced in the CPL. Exemplary cues include the Start of Show, Start of Feature, Start of Intermission, End of Intermission, Start of End Credits, and End of Show. Traditionally, the position of each cue within each CPL corresponds precisely to a position within an event timeline of the event the cue represents. For instance, the Start of Show cue lies immediately prior to the first frame of the first CPL. Similarly, the Start of Feature cue lies immediately prior to the first frame of the feature presentation CPL. In order to present the digital cinema content, the cues must reside at their proper locations within the playlist. Otherwise, the activities controlled by such cues will not occur automatically at the proper times.

Cue placement within the CPL to correspond precisely to the event in the timeline (e.g., placing the Start of Feature cue immediately prior to the first frame of the feature) can give rise to certain drawbacks. In some movie theaters, the facilities systems and the automation systems can operate to provide a more showman-like presentation upon advance notice of a change in certain circumstances. For instance, a projector might require a certain interval to warm up. Further, the screen curtain should close and the reopen prior to the start of the feature. Previously, such concerns, if not ignored, were addressed by manually advancing each cue by an appropriate, predetermined amount of time (e.g., 60-seconds) and then allowing the Screen Automation System (SAS) to manage the timing of actions relative to the newly advanced cue, hereinafter referred to as a “prefired” cue. Thus, in an auditorium where dimming the lights constitutes an activity resulting from the Start of Feature cue, the SAS will initiate that activity a fixed time, say 60-seconds, following the issuance of a Start of Feature cue by a Screen Management System.

However, not every movie theater uses the same type of light dimmers. For example, a given movie theater might possess a

light dimming system that fades the lights over a 20-second interval. Taking this dimming interval into account, an exhibitor might find that the most aesthetic presentation requires light dimming ten seconds prior to the start of the feature, which corresponds to fifty seconds following the Start of Feature cue. Thus, prefiring the light dimming cue by 60-seconds for every theater would yield a sub-optimal presentation.

See '751 Specification at col. 1, l. 22 – col. 2, l. 19.

36. The '751 patent then states:

As another example, consider a movie theater having elaborate lighting and curtain equipment. For such a theater, the curtain close command should occur at a particular time empirically determined so that screen curtain closes at the instant the feature begins playing, after which the curtains should re-open. Such an interval will typically differ from the standard sixty second prefiring interval. Applying the standard sixty second prefire interval under circumstances would cause the feature to begin playing either too early or too late with respect to the closing and re-opening of the screen curtain. The timing for dimming the lights typically will vary as well from theater to theater. Other actions might require different timing, such as pausing playout of the CPLs for a brief interval, when a predetermined interval has elapsed or some variable duration event has occurred, such as the manual triggering of a signal.

Certainly, an advantage accrues by providing a single SPL having cues with corresponding predetermined prefire offsets because such an SPL can undergo execution in any auditorium having an SAS configured to handle cues having substantially the same corresponding prefire offset. The resulting playout of the digital cinema content will have an aesthetic, showman-like presentation. However, this approach incurs the disadvantage that a projectionist or other theater personnel constructing the SPL must have knowledge of the appropriate, predetermined prefire offset for each kind of the cue inserted into the SPL. Also, the presence of the cues having prefires can result in an awkward-looking SPL presentation, where the 'Start of Feature' cue might occur

halfway through the trailer CPL prior to the exhibitor-branded 'And now our Feature Presentation' CPL positioned prior to the actual feature CPL.

In the case of a Start of Show cue, present-day Screen Management Systems typically do not support a timeline having a cue positioned at any time earlier than immediately prior to the beginning of the first CPL. Thus, no normal way exists to position a Start of Show cue with a prefire of any non-zero offset from the start of the first CPL. To workaround to this problem, a projectionist or other theater personnel will prepend an interval of black content, typically as a CPL having a predetermined number of seconds filled with black pixels, to the head of SPL, and placing the Start of Show cue within this interval according to the predetermined prefire offset. Having prefired cues in the SPL affords the ability to produce an optimal presentation in any auditorium but the look and configuration of the SPL will not be intuitive, convenient, or reliable. Projectionists, being human, can make errors in the SPL such as omitting or misplacing cues, forgetting the black CPLs, forgetting prefire offsets, and providing incorrect prefire offsets. Should one or more CPLs intervene between the prefired cue and the associated event (as discussed above); the projectionist must understand the duration of those CPLs. Using such information, the projectionist must subtract such time values from the prefire interval and position the actual cue within the appropriate CPL at the residual prefire offset before the end, a daunting task.

See '751 Specification at col. 2, l. 20 – col. 3, l. 7.

37. The '751 patent then also states “[t]hus a need exists for a technique for managing activities in connection with the presentation of digital cinema content that overcomes the aforementioned disadvantages.” *See* '751 Specification at col. 3, ll. 9-11.

38. The invention(s) claimed in the '751 patent solves various technological problems inherent to movie theater management systems and enables such systems to, among other things, (1) allow movie theater operators to reduce the complexity of

providing a showman-like presentation with respect to movie theater automation, (2) simplifying various aspects of movie theater operations, and (3) provide movie theater operators more intuitive interfaces for managing movie theater operations.

United States Patent No. 8,493,544

39. On July 23, 2013, the “USPTO” duly and legally issued United States Patent No. 8,493,544 (“the ‘544 patent”) entitled “Method and Apparatus for Pre-Firing Cues During a Digital Cinema Presentation.”

40. The ‘544 patent is presumed valid under 35 U.S.C. § 282.

41. Boulder owns all rights, title, and interest in the ‘544 patent.

42. On information and belief, Boulder has not granted Cinemark an approval, an authorization, or a license to the rights under the ‘544 patent.

43. The ‘544 patent relates to, among other things, the automated scheduling of digital movie theater presentation operations.

44. The specification of the ‘544 patent is the same as the ‘751 patent specification, and solves the problems recited above and described in the ‘544 patent specification.

United States Patent No. 9,002,017

45. On April 7, 2015, the “USPTO” duly and legally issued United States Patent No. 9,002,017 (“the ‘017 patent”) entitled “Method and Apparatus for Key Distribution for Secure Digital Cinema Presentations.”

46. The ‘017 patent is presumed valid under 35 U.S.C. § 282.

47. Boulder owns all rights, title, and interest in the ‘017 patent.

48. On information and belief, Boulder has not granted Cinemark an approval, an authorization, or a license to the rights under the '017 patent.

49. The '017 patent relates to, among other things, the distribution and management of keys with respect to the operations of a digital movie theater.

50. The claimed invention(s) of the '017 patent sought to solve problems associated with the distribution and use of digital rights management keys used in the operation of digital movie theaters. For example, the '017 patent states:

The term "Digital Cinema" generally refers to the theatrical presentation of motion pictures (as well as other types of audio-visual works) by electronic means, such as the use of projectors that receive digital data and render that data into optical stream for projection on a screen. To facilitate the coordination among content creators, content distributors, equipment providers and theaters, seven motion picture studios: Disney, Fox, Metro-Goldwyn-Mayer, Paramount Pictures, Sony Pictures Entertainment, Universal Studios, and Warner Bros. Studios, created an entity known as Digital Cinema Initiatives, LLC (DCI), which published the *Digital Cinema System Specification V1.0*, (DCI Specification) on Jul. 20, 2005. The primary purpose of DCI was to establish uniform specifications that would ultimately permit full realization of the benefits of digital cinema to theater audiences, theater owners, filmmakers and distributors.

The DCI specification describes the formatting of files representing moving images, audio and other data for distribution to theatres. In the theatre, such files provide a non-fading, non-scratched version of an audio visual presentation that affords the same high quality presentation to viewers each and every time so the presentation looks as good at its last showing as it did during its initial showing. The very advantage of digital cinema makes it very attractive to media pirates. Thus, a danger exists that media pirates will attempt to acquire a copy of the pristine digital files in order to make and sell counterfeit DVDs of high quality and do so ahead of the studio's intended release schedule.

See '017 Specification at col. 1, ll. 23- 50.

51. The '017 patent then states:

The DCI Specification details a mechanism to secure digital cinema presentations continuously, until the very moment the presentation appears on the theatre screen. Collectively, the files representing a presentation comprise a “package”. Each file of the package is encrypted with a different symmetric key at the time of packing. Those same keys become necessary to decrypt the corresponding files when played for presentation.

Each theater will receive the same package containing the encrypted media files. However, while every package remains the same, each theater receives a different key for each screen. Rather than distribute these keys in an unsecured way, the keys themselves undergo encryption. Further, for each screen there exists a different encryption. Each screen (*i.e.*, each individual auditorium) typically has its own Screen management System (SMS) which includes the secure media block (*i.e.*, media decoder) and an associated projector, constituting all the equipment needed to show a presentation. As a result of the different encryption used for each screen, the key for the target SMS will have no use on another SMS. In other words, each SMS will require its own key. A theater having multiple screens will typically have a theater management system (TMS) for controlling each individual SMS.

In practice, the encryption specified for keys makes use of an asymmetric public key technique. Each target SMS showing DCI compliant presentations will have a secure digital certificate. The target SMS associated with this secure digital certificate has a corresponding private key for decrypting. The distributor will provide the certificate which represents the public key corresponding to the private key known only by the target. In this way, the distributor can prepare and encrypt the package, and distribute it to all theatres, such as by satellite broadcast. The contents have no use to anyone without the keys for decryption.

A distributor will assemble and encrypt the keys for decryption of the package using the certificate provided, thus creating a “Key Distribution Message” (KDM) which comprises an encrypted collection of keys only readable by the target SMS whose certificate was used. When prepared in this way, the KDMs are unique for each theater screen authorized to exhibit the presentation. Typically, the KDMs have a relatively small size (*e.g.*, several kilobytes).

The DCI Specification does not provide many details for distribution of the KDMs. However, the DCI specification does require a dial-up modem connection as the means for transporting KDMs. The specification allows for the provision of alternative interfaces.

The DCI Specification further encourages that the TMS or SMS, following receipt (*i.e.*, ingest) of a complete package at theater, verify the availability of a KDM and display the corresponding time window for showing the content. A show schedule generated by the TMS or SMS can reveal conflicts between the KDM and the scheduled showings. In addition, the DCI Specification encourages that the TMS or SMS alert the projectionist or theatre management when a KDM will expire within 48 hours of the current time.

Present-day, experimental implementations of digital cinema typically find KDMs placed on a removable FLASH storage device having a USB interface. These small, highly portable storage devices can be physically mailed or personally transported to the target system. Once brought to the target system and installed, a projectionist uses a control interface on the target SMS to navigate to the FLASH drive. Then the projectionist manually browses through the directory structure, and selects an appropriate KDM, and commands the target system to load the KDM.

In certain circumstances, *e.g.* a premiere, where a specific presentation is restricted to a particular screen, then only a single KDM is necessary. However, unnecessary constraints tying a presentation to a specific screen should generally prove undesirable. If a theater has four digital cinema screens and books three movies, the distributor will preferably

provide separate KDM for each of the twelve possible combinations. The result proliferation of KDMs makes manual key management difficult.

See '017 Specification at col. 1, l. 51 – col. 2, l. 59.

52. The '017 patent then also states:

The combination of present-day digital cinema implementations and the behaviors specified or recommended by the DCI Spec given rise to need to manage a large amount of information theater by the operator, thus giving rise to numerous opportunities to fail to find or timely retrieve a KDM. Additionally, the simple inconvenience generated by the introduction of security keys creates an artifact not presently found in film projection systems, and can ultimately result in the inability to show a presentation at a desired time. There exists a need to overcome this shortfall.

See '017 Specification at col. 2, l. 60 – col. 3, l. 2.

53. The invention(s) claimed in the '017 patent solves various technological problems inherent in the digital movie theater key distribution and management systems and enables such systems to, among other things, simplify the distribution and management of multiple rights management keys with respect to the operations of a digital movie theater.

CLAIMS FOR RELIEF

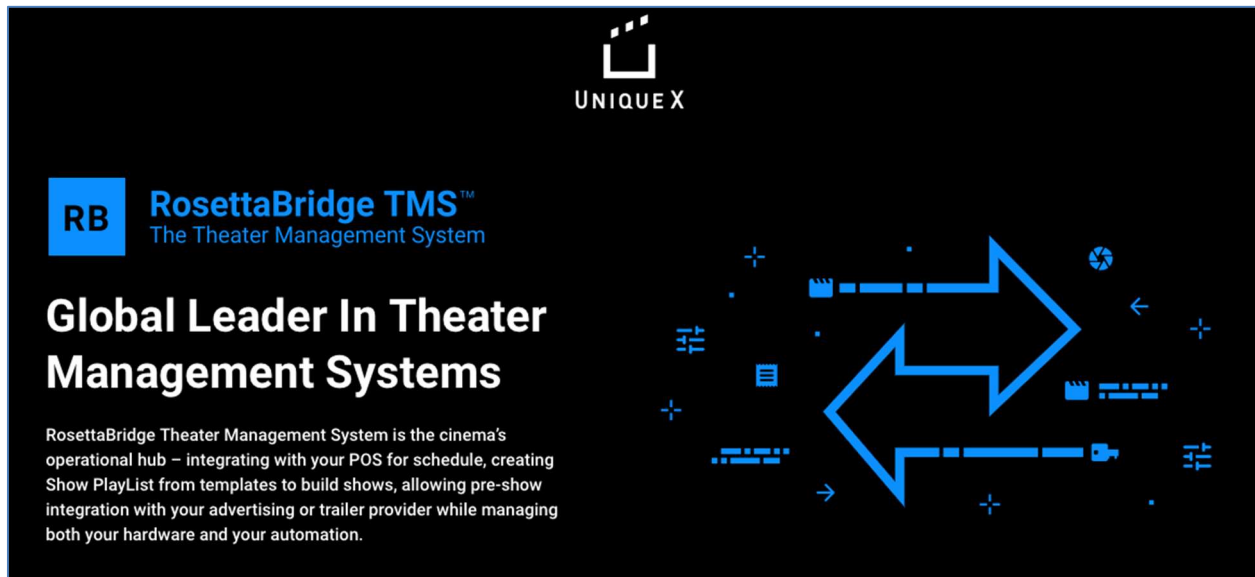
Count I – Infringement of United States Patent No. 6,829,033

54. Boulder repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

55. On information and belief, Cinemark (or those acting on its behalf) use of RBTMS infringes (literally and/or under the doctrine of equivalents), at least, claim 26 of the '033 patent.

56. On information and belief, Cinemark (or those acting on its behalf) incorporates RBTMS into the digital cinema systems it employs in its movie theaters. Cinemark's making and use of its digital cinema systems which incorporate RBTMS infringe (literally and/or under the doctrine of equivalents), at least, claim 26 of the '033 patent.

57. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising generating a schedule to assign one or more playlists for presentation.



26

1.5 Overview

The RosettaBridge Theatre Management System (TMS) is an application that lets you manage and control the operation of an entire theatre. Using a Graphical User Interface, you can construct and schedule playlists to be shown on screen servers, manage Key Delivery Messages (KDMs) to unlock feature films, manage the content of the TMS internal content library, and monitor the auditorium equipment.

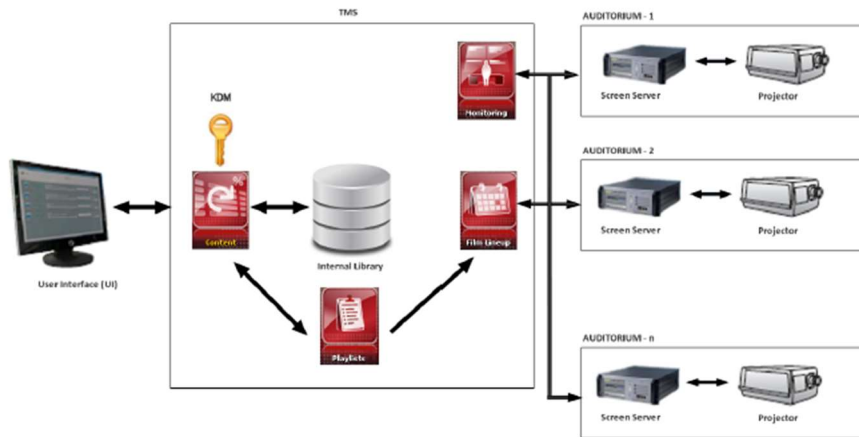


Figure 1 : TMS Overview

The TMS consists of the following main functional areas:

- **Monitoring:** Lets you monitor scheduled playback. Users with the required level of authorization may also take manual control of auditorium devices and modify scheduled playback.
- **Content:** Lets you move films, trailers and other content between external sources, TMS library and the auditorium servers.
- **Playlists:** Lets you build shows of content clips, functions associated with content clips and patterns.
- **Film line-up:** Lets you schedule playlists for showing on auditorium projectors and build advertising and trailer packs for use in playlists.

8 *Creating and Managing Playlists*

You can include all the components you need for a complete show in a single playlist. A playlist can consist of some or all of the following components:

- Content, such as feature films, advertisement, trailers and other types of content
- Show functions that are associated with content and that control auditorium equipment such as lights, dowers, projectors, program start and end credits.
- Patterns, for intervals during which black is projected on an auditorium screen.

You build a playlist from widgets representing different types of content, functions and patterns. You can also associate content with a number of different functions, and then schedule the function to occur either before or after the content has been shown. The required function thus becomes part of the content, and thereby the playlist, that you are building.

The Playlists feature also lets you create reusable, predefined playlist templates. This frees you from the tasks of manually selecting content and functions that are likely to remain constant, even though some content such as feature content is likely to change from time to time.

Complete playlists, whether built manually or from templates, are then available showing on an auditorium player. You can schedule the playlist to start at predefined times on predefined days using the Film Lineup feature described in the section *Lining-Up Films*.

You open the Playlist UI by selecting the Playlist function. The Playlist UI displayed:



Figure 67 : The Playlist User Interface

The Playlists UI consists of a **Playlists** panel to the left and **Auditoriums** panel to the right.

9 *Film Lineups*

The Film Lineup module provides the following film line-up functions:

- Schedule playlists to be shown on auditorium players over specified future dates
- Create advertising and trailer packages to populate playlist template placeholders
- Import schedules from external systems such as Point of Sale (POS) systems.

These functions are executed from the Film Lineups function bar:



Figure 73 : Lineup Functions

9.1 **Lineup Scheduler**

The line-up scheduler lets you

- Schedule playlists
- Monitor playlist schedules

9.1.1 **Scheduling Playlists**

You use the Schedule UI to manually schedule playlists to be played on auditorium players at certain specified dates and times. It provides UI objects that let you:

- Select playlists for scheduling
- Schedule the selected playlists

9.1.1.1 **Selecting Playlists**

Playlists available for scheduling are shown as widgets on the right-hand side of the Schedule UI:

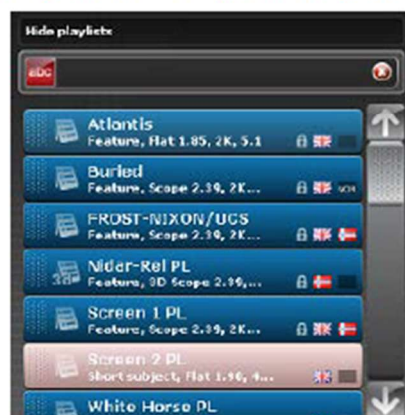


Figure 74 : Playlists to Schedule

You select playlist widgets and drag and drop them to the selected auditorium in the scheduling ribbon shown in Figure 74. The scheduling ribbon is located on the right hand side of the Schedule UI:

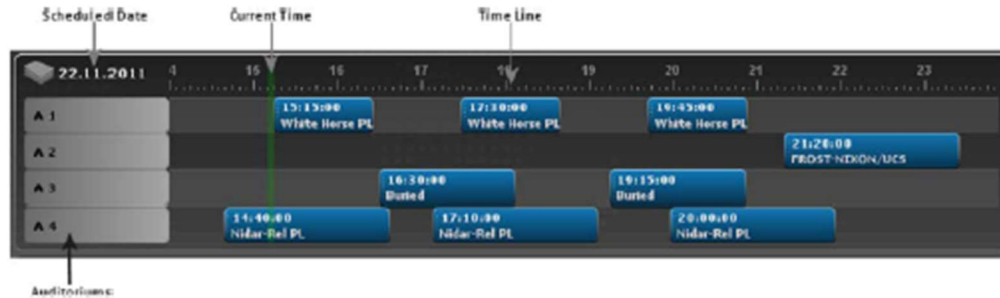


Figure 75 : Playlist Schedule Ribbon

The schedule ribbon shows:

- The Scheduled Date for the showing of the playlist.
- The Auditoriums where the scheduled playlists are dragged and dropped and displayed after being dragged from the Playlists in Figure 73
- If the scheduled date is today's date, the schedule ribbon displays the Current Time. In Figure 75, the playlist Nidar-Rel has already started to be shown on Auditorium A4, which is clearly visible by the Current Time relative to that playlist.
- The Time Line, showing the hours in the day of the Scheduled Date. The durations of the playlists can be matched visually with the time line, as shown in Figure 75.

9.1.1.3 Creating and Monitoring Future Schedule Periods

You can create and monitor schedules for several weeks in advance by specifying a schedule period to run from a start date up to an end date. A playlist ribbon for each day in the period is displayed vertically in increasing date order. You can then drag and drop playlists into each of the days in the schedule period.

You specify a period from the date panel shown in Figure 77:



Figure 77 : Date Filter

The two text fields at the top let you specify the start and end dates of the period respectively. The pushbutton controls add additional functions to the date filter in the following ways:

- **<Day:** Decrements the date by one day and displays the playlist ribbon for only that day
- **Today:** Displays the playlists scheduled for today
- **Day>:** Advances the date by one day and displays the playlist ribbons for only that day
- **<Week:** Decrements the date by seven days and displays the playlist ribbon for the next seven days.
- **Week:** Displays the playlists ribbons from today and the next six days
- **Week>:** Advances the date by seven days and displays the playlist ribbons for the next seven days.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

58. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising controlling presentation of the assigned one or more playlists based on the schedule.

1.5 Overview

The RosettaBridge Theatre Management System (TMS) is an application that lets you manage and control the operation of an entire theatre. Using a Graphical User Interface, you can construct and schedule playlists to be shown on screen servers, manage Key Delivery Messages (KDMs) to unlock feature films, manage the content of the TMS internal content library, and monitor the auditorium equipment.

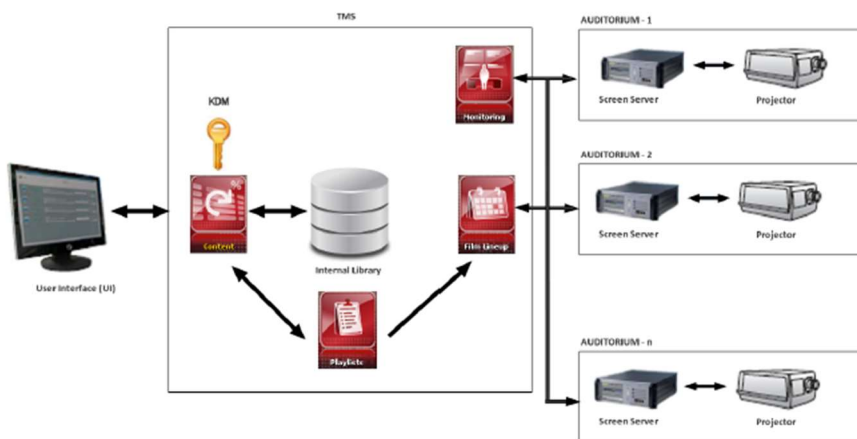


Figure 1 : TMS Overview

The TMS consists of the following main functional areas:

- **Monitoring:** Lets you monitor scheduled playback. Users with the required level of authorization may also take manual control of auditorium devices and modify scheduled playback.
- **Content:** Lets you move films, trailers and other content between external sources, TMS library and the auditorium servers.
- **Playlists:** Lets you build shows of content clips, functions associated with content clips and patterns.
- **Film line-up:** Lets you schedule playlists for showing on auditorium projectors and build advertising and trailer packs for use in playlists.

6 Monitoring

The section describes the TMS monitoring function and how you use the monitoring UI. TMS Monitoring functions let you monitor and control:

- The status of scheduled playback
- The status of auditorium devices
- If you are authorized to do so, take control of and manually operate auditorium devices.

You select the Monitoring functions by clicking the **Monitoring** tab from the main tabs bar.

6.2 Console

The Console presents a detail view of each auditorium in the theatre and adds additional functions for managing the program schedule. If you have administrator rights, you are able to use the console to manage the program schedule.

6.2.3 Management Overrides

If you are logged on to the TMS with administrative rights, you can manually override the content and scheduling of content being shown in an auditorium. You can also modify the settings of the projector and auditorium sound levels.

You perform manual overrides by positioning the mouse pointer over an auditorium in the console view and left clicking the mouse. The Auditorium Management Console is opened:



Figure 38 : Auditoriums Management Console

6.2.3.1 Setting the Playback Mode

You can manually set the playback mode by selecting the appropriate radio button from the Schedule mode panel in Figure 38. The different modes load content to the auditorium server in the following ways:

- **Manual:** Playlists and automation programs are loaded and started manually for each show.
- **Semi-auto:** Playlists and automation programs are loaded automatically before each show based on the schedule in Film Lineup. However, they must be started manually.
- **Auto:** The most frequently used mode. Playlists and automation programs are loaded and started automatically based on the schedule in Film Lineup.
- **Player:** The player mode lets you synchronize playlists between the TMS and the screen servers. Playlist schedules defined on a screen server can be imported to the TMS and playlist schedules can be exported from the TMS to a screen server.

Note: In player mode, any previously scheduled playlists in the TMS or on a screen server that conflict with the playlist schedules being imported or exported will be removed. Playlist schedules that are exported to the screen server are shown directly from the screen server in case the TMS is taken offline.

You can also clear all playlists from the TMS or the screen server from the Set Synchronisation Type dialog:

9.1.2 Copying Entire Schedules

You can copy an entire schedule by selecting an auditorium shown in the Schedule UI in Figure 74, dragging it to a different position on the Schedule UI, and dropping it there. Using this procedure, you can copy entire schedules:

- From one auditorium on one scheduled day to the same auditorium on another day
- From one auditorium to a different auditorium on the same scheduled day
- From one auditorium to another auditorium on a different scheduled day.

The schedule ribbon for the entire source days content replaces the schedule ribbon of the entire target days content.

Note: Copying a schedule to an auditorium that already has playlists scheduled will overwrite the targeted auditorium's content. The TMS warns you of this condition by displaying a warning dialog. For example:

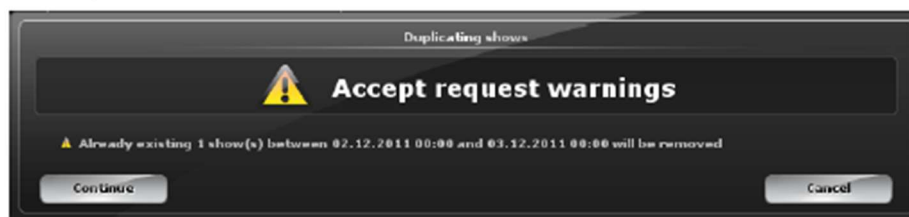


Figure 80 : Copy Overwrite Warning

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

59. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising sending a message indicating a change in the schedule if a change is made in the schedule.

6.2.3 Management Overrides

If you are logged on to the TMS with administrative rights, you can manually override the content and scheduling of content being shown in an auditorium. You can also modify the settings of the projector and auditorium sound levels.

You perform manual overrides by positioning the mouse pointer over an auditorium in the console view and left clicking the mouse. The Auditorium Management Console is opened:



Figure 38 : Auditoriums Management Console

6.2.3.1 Setting the Playback Mode

You can manually set the playback mode by selecting the appropriate radio button from the Schedule mode panel in Figure 38. The different modes load content to the auditorium server in the following ways:

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Note: In player mode, any previously scheduled playlists in the TMS or on a screen server that conflict with the playlist schedules being imported or exported will be removed. Playlist schedules that are exported to the screen server are shown directly from the screen server in case the TMS is taken offline.

You can also clear all playlists from the TMS or the screen server from the **Set Synchronisation Type** dialog:



Figure 39 : Set Synchronization Type Dialog

9.1.2 Copying Entire Schedules

You can copy an entire schedule by selecting an auditorium shown in the Schedule UI in Figure 74, dragging it to a different position on the Schedule UI, and dropping it there. Using this procedure, you can copy entire schedules:

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- From one auditorium to a different auditorium on the same scheduled day
- From one auditorium to another auditorium on a different scheduled day.

The schedule ribbon for the entire source days content replaces the schedule ribbon of the entire target days content.

Note: Copying a schedule to an auditorium that already has playlists scheduled will overwrite the targeted auditorium's content. The TMS warns you of this condition by displaying a warning dialog. For example:

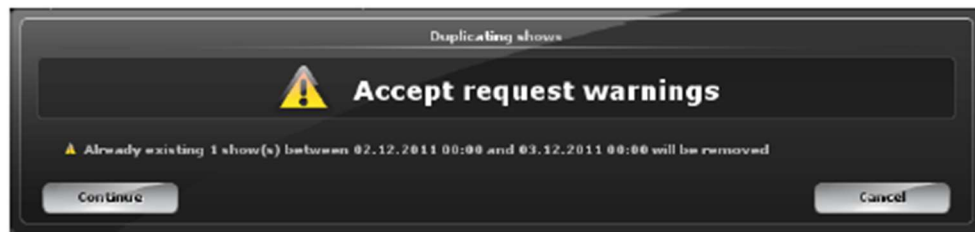


Figure 80 : Copy Overwrite Warning

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

60. On information and belief, Cinemark directly infringes at least claim 26 of the '033 patent, and is in violation of 35 U.S.C. § 271(a) by using RBTMS.

61. Cinemark's direct infringement has damaged Boulder and caused it to suffer and continue to suffer irreparable harm and damages.

Count II – Infringement of United States Patent No. 8,395,751

62. Boulder repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

63. On information and belief, Cinemark (or those acting on its behalf) use of RBTMS infringes (literally and/or under the doctrine of equivalents), at least, claim 1 of the '751 patent.

64. On information and belief, Cinemark (or those acting on its behalf) incorporates RBTMS into the digital cinema systems it employs in its movie theaters. Cinemark's making and use of its digital cinema systems which incorporate RBTMS infringe (literally and/or under the doctrine of equivalents), at least, claim 1 of the '751 patent.

65. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising examining a playlist specifying a time sequence of events to occur during presentation of digital cinema content to identify at least one cue which triggers the occurrence of an activity.

1.5 Overview

The RosettaBridge Theatre Management System (TMS) is an application that lets you manage and control the operation of an entire theatre. Using a Graphical User Interface, you can construct and schedule playlists to be shown on screen servers, manage Key Delivery Messages (KDMs) to unlock feature films, manage the content of the TMS internal content library, and monitor the auditorium equipment.

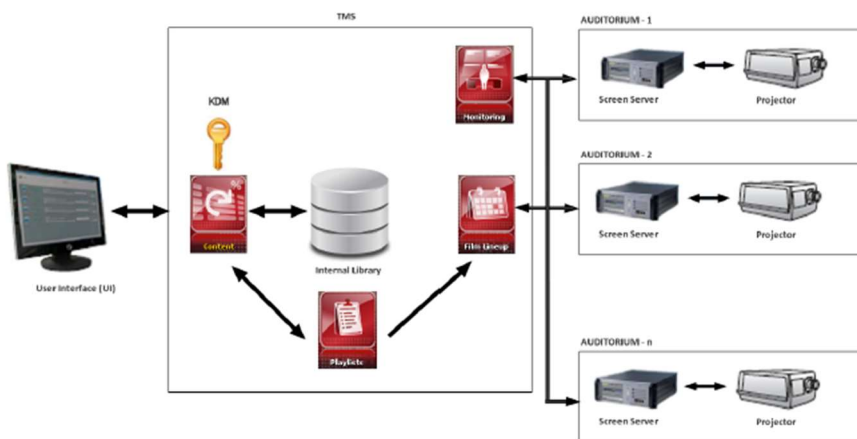


Figure 1 : TMS Overview

The TMS consists of the following main functional areas:

- **Monitoring:** Lets you monitor scheduled playback. Users with the required level of authorization may also take manual control of auditorium devices and modify scheduled playback.
- **Content:** Lets you move films, trailers and other content between external sources, TMS library and the auditorium servers.
- **Playlists:** Lets you build shows of content clips, functions associated with content clips and patterns.
- **Film line-up:** Lets you schedule playlists for showing on auditorium projectors and build advertising and trailer packs for use in playlists.

3.3.4 Pattern Widgets

A pattern widget represents an interval during which black is shown on an auditorium screen. Such intervals are used while auditorium equipment changes take place.



Figure 21 : Pattern Widget

Figure 22 shows a detail view of a pattern widget:



Figure 22 : Pattern Widget Detail

6.1.2.3 Next Cue

The following attributes describe the status of the next scheduled playlist to be shown:

<i>Attribute</i>	<i>Description</i>
In	The time remaining until the Cue triggers
Next Cue	The name of the next programmed automation macro

Table 3: Next Cue Status

6.1.3 Detail System Overview

You use the System Overview panel to view in detail the current status of all the auditorium screens.

You use the detail button to display a system detail view:



A status detail view is displayed as a ribbon, as shown in Figure 35

Screen 5	Current Playlist	Next Cue	Next Playlist
A	SKOLSKA projekcija 2D	Screen LIGHTS 5...	
Remain	01:06:05	End	13:08
	2D	In	01:02:35
		In	

Figure 35 : Status Detail

6.2.2 Console View

For each auditorium in the theatre, the console view shows a ribbon of summary information about:

- The playlist currently being shown
- The sound system
- The auditorium devices, such as the projector.

Figure 37 shows the auditorium summary view ribbon:



Figure 37 : Auditorium Summary View

The Console View attributes describe the following characteristics of the current playlist, cues and projector status for the auditorium hosting the playlist:

Attribute	Description
Playlist Status	The current status of the playlist loaded onto the screen server. Displays a No show warning if no playlist is loaded.
Playlist Name	The name of the playlist loaded onto the screen server.
Total Length	The duration of a loaded playlist.
Total Remaining	If the playlist is status Running, shows the time remaining until the playlist finishes showing.
Next show in	The period of time between the current playlist finishing and the next playlist starting.
Next show at	The start of the next scheduled playlist.
Next event cue	Name of the next automation macro programmed in playlist
Next event in	Time until macro is triggered.
Pre show length	The length of ads and trailers that precede a feature in a playlist.
Next show title	The name of the next scheduled playlist.
Format	The current audio format from the sound processor.
Volume	The current volume level of the sound processor.
Macro	The name of the next macro to be executed.
Dowser	The projector shutter state, that is, open or closed.
Lamp	The status of the lamp, either on or off.

7.4 CPL Marking

The CPL marking function lets you keep track of the end credits and intermission time codes associated with a feature. You create a CPL marker for an end credits or intermission after a feature has been successfully ingested into a playlist. Once the marker has been created, an end credits or intermission function cue automatically follows the feature.

To create CPL markers, click the CPL Markers tab. The CPL Markers GUI is displayed:

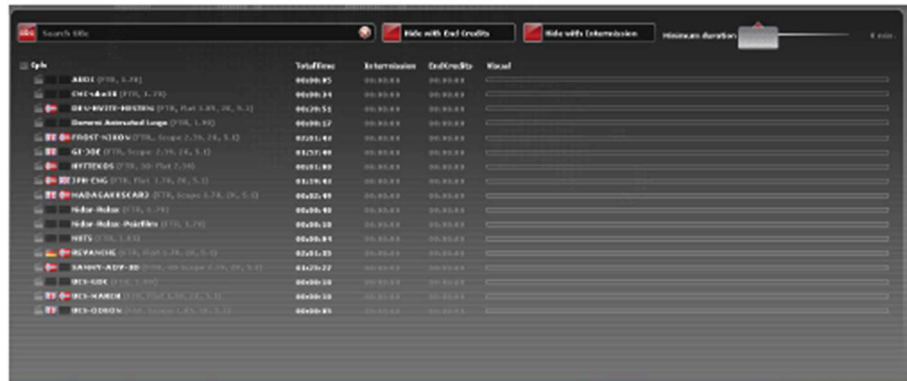


Figure 59 : CPL Markers GUI

8 *Creating and Managing Playlists*

You can include all the components you need for a complete show in a single playlist. A playlist can consist of some or all of the following components:

- Content, such as feature films, advertisement, trailers and other types of content
- Show functions that are associated with content and that control auditorium equipment such as lights, dowers, projectors, program start and end credits.
- Patterns, for intervals during which black is projected on an auditorium screen.

You build a playlist from widgets representing different types of content, functions and patterns. You can also associate content with a number of different functions, and then schedule the function to occur either before or after the content has been shown. The required function thus becomes part of the content, and thereby the playlist, that you are building.

The Playlists feature also lets you create reusable, predefined playlist templates. This frees you from the tasks of manually selecting content and functions that are likely to remain constant, even though some content such as feature content is likely to change from time to time.

Complete playlists, whether built manually or from templates, are then available showing on an auditorium player. You can schedule the playlist to start at predefined times on predefined days using the Film Lineup feature described in the section *Lining-Up Films*.

You open the Playlist UI by selecting the Playlist function. The Playlist UI displayed:



Figure 67 : The Playlist User Interface

The Playlists UI consists of a **Playlists** panel to the left and **Auditoriums** panel to the right.

8.1.1.4 Preparing Auditorium Equipment

You can add a Pattern Widget to a playlist to show black on an auditorium screen while auditorium and equipment functions are automatically executed. Black content is used to project a black image on screen. This is normally used as a delay to provide time for effects such as projector, masking, sound format or lighting changes to complete before the next piece of content is played.

The effects that you need during the duration of the black screen are selected from Function Widgets and dropped onto the Pattern Widget. The following example illustrates the kind of effects that could be performed during a 30 second black screen:

<i>Function</i>	<i>Accumulated time (seconds)</i>
Start projector lamp	1
Set projector to 3D scope	2
Play audio advertisement	5
Mask scope	10
Set auditorium lights to mid	28
Open dowser	29

Note: The available functions shown above may not necessarily be available to your theatre and your TMS setup. Macros and cues that support such functions are setup by a system administrator during the installation of TMS and are outside the scope of this manual. However, those functions that are available are displayed in the Function Widget drop-down, and may be used in the manner shown.

Although a Pattern Widget can be directly included in a playlist, the usual place for a Pattern Widgets is in a playlist template. In a template, the functions and the cues the patter widget contains are always executed in the same order without having to be explicitly set up every time a new playlist is created. All the required show functions are contained in the Pattern Widget and not affected by changes to other parts of the playlist such as the adding or removing content.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

66. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising automatically determining for the at least one identified cue, a prefire interval by which the cue should be advanced.

8 *Creating and Managing Playlists*

You can include all the components you need for a complete show in a single playlist. A playlist can consist of some or all of the following components:

- Content, such as feature films, advertisement, trailers and other types of content
- Show functions that are associated with content and that control auditorium equipment such as lights, dowers, projectors, program start and end credits.
- Patterns, for intervals during which black is projected on an auditorium screen.

You build a playlist from widgets representing different types of content, functions and patterns. You can also associate content with a number of different functions, and then schedule the function to occur either before or after the content has been shown. The required function thus becomes part of the content, and thereby the playlist, that you are building.

The Playlists feature also lets you create reusable, predefined playlist templates. This frees you from the tasks of manually selecting content and functions that are likely to remain constant, even though some content such as feature content is likely to change from time to time.

Complete playlists, whether built manually or from templates, are then available showing on an auditorium player. You can schedule the playlist to start at predefined times on predefined days using the Film Lineup feature described in the section *Lining-Up Films*.

You open the Playlist UI by selecting the Playlist function. The Playlist UI displayed:



Figure 67 : The Playlist User Interface

The Playlists UI consists of a **Playlists** panel to the left and **Auditoriums** panel to the right.

3.3.2 Function Widgets

A function widget is represents an automated process that is associated with content. The function may be executed before, during or after the content is shown. Figure 17 illustrates a function widget associated with the Content Widget shown in Figure 15:



Figure 17 Function Widget

This widget displays the following information:

- It is associated with a feature because it is coloured blue
- The function is primed to occur 10 seconds after the content it is associated with is shown.

Associating content widgets with functions is described in Section 7, *Creating and Managing Playlists*.

3.3.2.1 Function Widget Detail

Figure 18 shows a detail view of the function widget associated with the end credits for the FROST-NIXON playlist:

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The TMS User Interface
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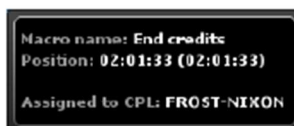


Figure 18 Function Widget Detail

3.3.4 Pattern Widgets

A pattern widget represents an interval during which black is shown on an auditorium screen. Such intervals are used while auditorium equipment changes take place.



Figure 21 : Pattern Widget

Figure 22 shows a detail view of a pattern widget:



Figure 22 : Pattern Widget Detail

8.1.1.2 The Playlist Panel

The playlist panel is the work area where you drag and drop widgets selected from the Content panel widget drop-down menus. You also associate functions with Content Widgets by dragging and dropping the required function widget directly on to the Content Widget already in the playlist panel.

8.1.1.3 Time Column

Although the scheduling of playlists is managed by the Film Lineup functions described in the section Lining-Up Films, *Scheduling Playlists*, the order and duration of the content and functions that you include in the playlist is important. You use the time column at the centre of the playlist panel to view the accumulated time that content takes to be shown and associated functions take to be executed. For example:



Figure 68 : Time Column

The playlist panel shows content and pattern widgets dragged from the widget drop-down menus. These are always shown to the left of the time column. Associated function widgets that are dragged from the functions drop-down menu and dropped on to content and pattern widgets are shown to the right.

8.1.1.4 Preparing Auditorium Equipment

You can add a Pattern Widget to a playlist to show black on an auditorium screen while auditorium and equipment functions are automatically executed. Black content is used to project a black image on screen. This is normally used as a delay to provide time for effects such as projector, masking, sound format or lighting changes to complete before the next piece of content is played.

The effects that you need during the duration of the black screen are selected from Function Widgets and dropped onto the Pattern Widget. The following example illustrates the kind of effects that could be performed during a 30 second black screen:

<i>Function</i>	<i>Accumulated time (seconds)</i>
Start projector lamp	1
Set projector to 3D scope	2
Play audio advertisement	5
Mask scope	10
Set auditorium lights to mid	28
Open dowser	29

Note: The available functions shown above may not necessarily be available to your theatre and your TMS setup. Macros and cues that support such functions are setup by a system administrator during the installation of TMS and are outside the scope of this manual. However, those functions that are available are displayed in the Function Widget drop-down, and may be used in the manner shown.

Although a Pattern Widget can be directly included in a playlist, the usual place for a Pattern Widgets is in a playlist template. In a template, the functions and the cues the patter widget contains are always executed in the same order without having to be explicitly set up every time a new playlist is created. All the required show functions are contained in the Pattern Widget and not affected by changes to other parts of the playlist such as the adding or removing content.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

67. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising advancing execution of the at least one cue to trigger the corresponding activity by the automatically determined pre-fire interval.

8 *Creating and Managing Playlists*

You can include all the components you need for a complete show in a single playlist. A playlist can consist of some or all of the following components:

- Content, such as feature films, advertisement, trailers and other types of content
- Show functions that are associated with content and that control auditorium equipment such as lights, dowers, projectors, program start and end credits.
- Patterns, for intervals during which black is projected on an auditorium screen.

You build a playlist from widgets representing different types of content, functions and patterns. You can also associate content with a number of different functions, and then schedule the function to occur either before or after the content has been shown. The required function thus becomes part of the content, and thereby the playlist, that you are building.

The Playlists feature also lets you create reusable, predefined playlist templates. This frees you from the tasks of manually selecting content and functions that are likely to remain constant, even though some content such as feature content is likely to change from time to time.

Complete playlists, whether built manually or from templates, are then available showing on an auditorium player. You can schedule the playlist to start at predefined times on predefined days using the Film Lineup feature described in the section *Lining-Up Films*.

You open the Playlist UI by selecting the Playlist function. The Playlist UI displayed:



Figure 67 : The Playlist User Interface

The Playlists UI consists of a **Playlists** panel to the left and **Auditoriums** panel to the right.

3.3.2 Function Widgets

A function widget is represents an automated process that is associated with content. The function may be executed before, during or after the content is shown. Figure 17 illustrates a function widget associated with the Content Widget shown in Figure 15:



Figure 17 Function Widget

This widget displays the following information:

- It is associated with a feature because it is coloured blue
- The function is primed to occur 10 seconds after the content it is associated with is shown.

Associating content widgets with functions is described in Section 7, *Creating and Managing Playlists*.

3.3.2.1 Function Widget Detail

Figure 18 shows a detail view of the function widget associated with the end credits for the FROST-NIXON playlist:

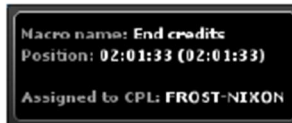


Figure 18 Function Widget Detail

8.1.1.2 The Playlist Panel

The playlist panel is the work area where you drag and drop widgets selected from the Content panel widget drop-down menus. You also associate functions with Content Widgets by dragging and dropping the required function widget directly on to the Content Widget already in the playlist panel.

8.1.1.3 Time Column

Although the scheduling of playlists is managed by the Film Lineup functions described in the section *Lining-Up Films, Scheduling Playlists*, the order and duration of the content and functions that you include in the playlist is important. You use the time column at the centre of the playlist panel to view the accumulated time that content takes to be shown and associated functions take to be executed. For example:



Figure 68 : Time Column

The playlist panel shows content and pattern widgets dragged from the widget drop-down menus. These are always shown to the left of the time column. Associated function widgets that are dragged from the functions drop-down menu and dropped on to content and pattern widgets are shown to the right.

8.1.1.4 Preparing Auditorium Equipment

You can add a Pattern Widget to a playlist to show black on an auditorium screen while auditorium and equipment functions are automatically executed. Black content is used to project a black image on screen. This is normally used as a delay to provide time for effects such as projector, masking, sound format or lighting changes to complete before the next piece of content is played.

The effects that you need during the duration of the black screen are selected from Function Widgets and dropped onto the Pattern Widget. The following example illustrates the kind of effects that could be performed during a 30 second black screen:

<i>Function</i>	<i>Accumulated time (seconds)</i>
Start projector lamp	1
Set projector to 3D scope	2
Play audio advertisement	5
Mask scope	10
Set auditorium lights to mid	28
Open dower	29

Note: The available functions shown above may not necessarily be available to your theatre and your TMS setup. Macros and cues that support such functions are setup by a system administrator during the installation of TMS and are outside the scope of this manual. However, those functions that are available are displayed in the Function Widget drop-down, and may be used in the manner shown.

Although a Pattern Widget can be directly included in a playlist, the usual place for a Pattern Widgets is in a playlist template. In a template, the functions and the cues the patter widget contains are always executed in the same order without having to be explicitly set up every time a new playlist is created. All the required show functions are contained in the Pattern Widget and not affected by changes to other parts of the playlist such as the adding or removing content.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

68. On information and belief, Cinemark directly infringes at least claim 1 of the '751 patent, and is in violation of 35 U.S.C. § 271(a) by using RBTMS.

69. Cinemark's direct infringement has damaged Boulder and caused it to suffer and continue to suffer irreparable harm and damages.

Count III – Infringement of United States Patent No. 8,493,544

70. Boulder repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

71. On information and belief, Cinemark (or those acting on its behalf) use of RBTMS infringes (literally and/or under the doctrine of equivalents), at least, claim 1 of the '544 patent.

72. On information and belief, Cinemark (or those acting on its behalf) incorporates RBTMS into the digital cinema systems it employs in its movie theaters. Cinemark's making and use of its digital cinema systems which incorporate RBTMS infringe (literally and/or under the doctrine of equivalents), at least, claim 1 of the '544 patent.

73. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising the step of examining a feature composition in a playlist specifying a time sequence of digital cinema compositions to determine whether a first marker corresponding to a cue is present.

1.5 Overview

The RosettaBridge Theatre Management System (TMS) is an application that lets you manage and control the operation of an entire theatre. Using a Graphical User Interface, you can construct and schedule playlists to be shown on screen servers, manage Key Delivery Messages (KDMs) to unlock feature films, manage the content of the TMS internal content library, and monitor the auditorium equipment.

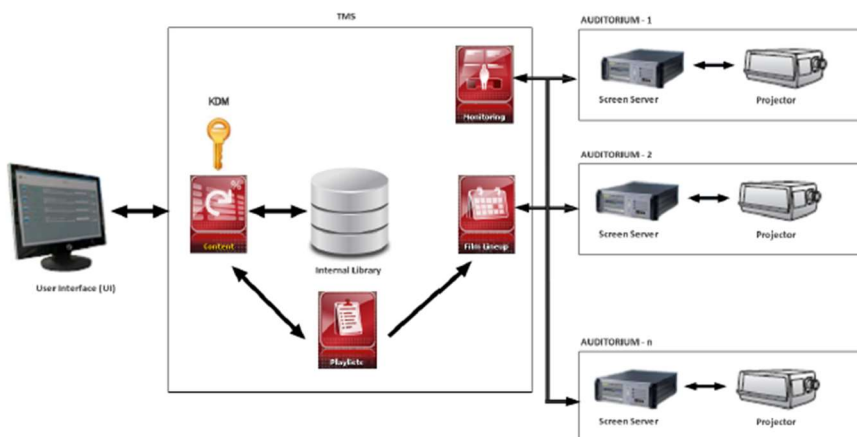


Figure 1 : TMS Overview

The TMS consists of the following main functional areas:

- **Monitoring:** Lets you monitor scheduled playback. Users with the required level of authorization may also take manual control of auditorium devices and modify scheduled playback.
- **Content:** Lets you move films, trailers and other content between external sources, TMS library and the auditorium servers.
- **Playlists:** Lets you build shows of content clips, functions associated with content clips and patterns.
- **Film line-up:** Lets you schedule playlists for showing on auditorium projectors and build advertising and trailer packs for use in playlists.

6.1.3 Detail System Overview

You use the System Overview panel to view in detail the current status of all the auditorium screens.

You use the detail button to display a system detail view: 

A status detail view is displayed as a ribbon, as shown in Figure 35

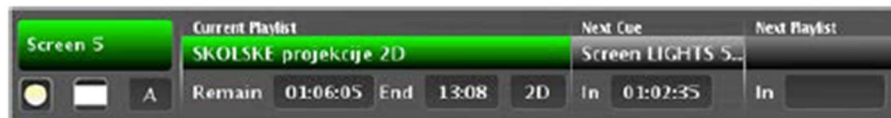


Figure 35 : Status Detail

6.2.2 Console View

For each auditorium in the theatre, the console view shows a ribbon of summary information about:

- The playlist currently being shown
- The sound system
- The auditorium devices, such as the projector.

Figure 37 shows the auditorium summary view ribbon:



Figure 37 : Auditorium Summary View

The Console View attributes describe the following characteristics of the current playlist, cues and projector status for the auditorium hosting the playlist:

Attribute	Description
Playlist Status	The current status of the playlist loaded onto the screen server. Displays a No show warning if no playlist is loaded.
Playlist Name	The name of the playlist loaded onto the screen server.
Total Length	The duration of a loaded playlist.
Total Remaining	If the playlist is status Running, shows the time remaining until the playlist finishes showing.
Next show in	The period of time between the current playlist finishing and the next playlist starting.
Next show at	The start of the next scheduled playlist.
Next event cue	Name of the next automation macro programmed in playlist
Next event in	Time until macro is triggered.
Pre show length	The length of ads and trailers that precede a feature in a playlist.
Next show title	The name of the next scheduled playlist.
Format	The current audio format from the sound processor.
Volume	The current volume level of the sound processor.
Macro	The name of the next macro to be executed.
Dowser	The projector shutter state, that is, open or closed.
Lamp	The status of the lamp, either on or off.

7.4 CPL Marking

The CPL marking function lets you keep track of the end credits and intermission time codes associated with a feature. You create a CPL marker for an end credits or intermission after a feature has been successfully ingested into a playlist. Once the marker has been created, an end credits or intermission function cue automatically follows the feature.

To create CPL markers, click the **CPL Markers** tab. The CPL Markers GUI is displayed:

[illegible]

Figure 59 : CPL Markers GUI

7.4.1 Creating a Marker

To create a marker, you double-click the feature title from the list of CPLs. A set marker interval dialog is displayed:

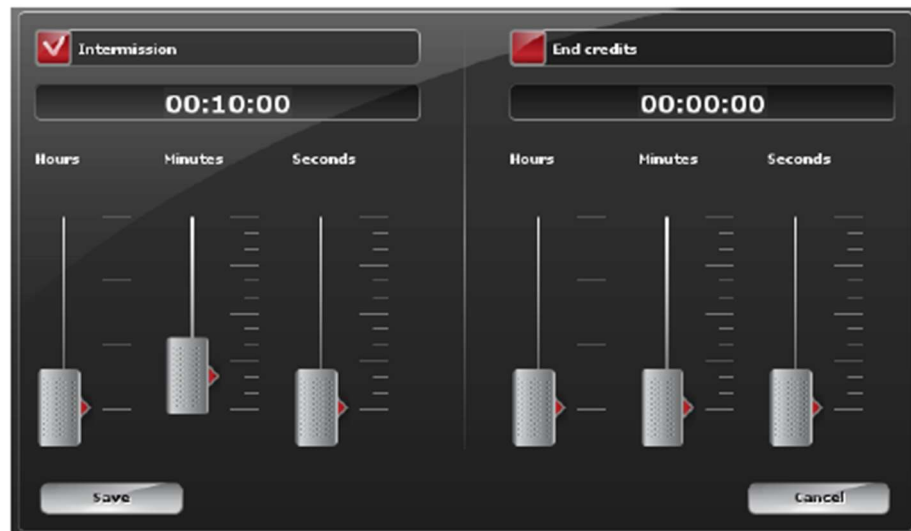


Figure 60 : Set Marker Interval

To set the desired time for an intermission or end credit, manipulate the sliders until the desired interval is displayed in the time field above the sliders.

Note: If you select an interval that is greater than the show time of the content, the interval in the time field is displayed in red.

Click the Save button to apply the interval to the feature. The feature titles are updated to show the markers that you have applied. For example, in Figure 61 the feature FROST-NIXON has an intermission marker of five minutes and the feature GI-JOE an end credit marker of two minutes.

	FROST-NIXON (PTR, Scope 2.39, 2K, 5.1)	02:01:43	00:05:30	00:00:00	
	GI-JOE (FTR, Scope 2.39, 2K, 5.1)	01:57:40	00:00:00	00:02:00	

Figure 61 : Marker Examples

To modify a marker and set a new interval, double click the feature and adjust the slider for the appropriate marker in the Set Marker Interval dialog shown in Figure 60.

To remove a marker, double click the feature and deselect the appropriate marker in the Set Marker Interval dialog shown in Figure 60.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

74. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method

comprising the step of if the first marker is present, then placing the cue in the playlist at the first marker.

7.4 CPL Marking

The CPL marking function lets you keep track of the end credits and intermission time codes associated with a feature. You create a CPL marker for an end credits or intermission after a feature has been successfully ingested into a playlist. Once the marker has been created, an end credits or intermission function cue automatically follows the feature.

To create CPL markers, click the CPL Markers tab. The CPL Markers GUI is displayed:

Title	TotalTime	Intermission	EndCredits	Visual
AA01 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA02 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA03 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA04 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA05 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA06 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA07 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA08 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA09 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA10 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA11 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA12 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA13 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA14 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA15 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA16 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA17 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA18 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA19 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	
AA20 (1:00, 1:00)	00:00:01	00:00:00	00:00:00	

Figure 59 : CPL Markers GUI

7.4.1 Creating a Marker

To create a marker, you double-click the feature title from the list of CPLs. A set marker interval dialog is displayed:

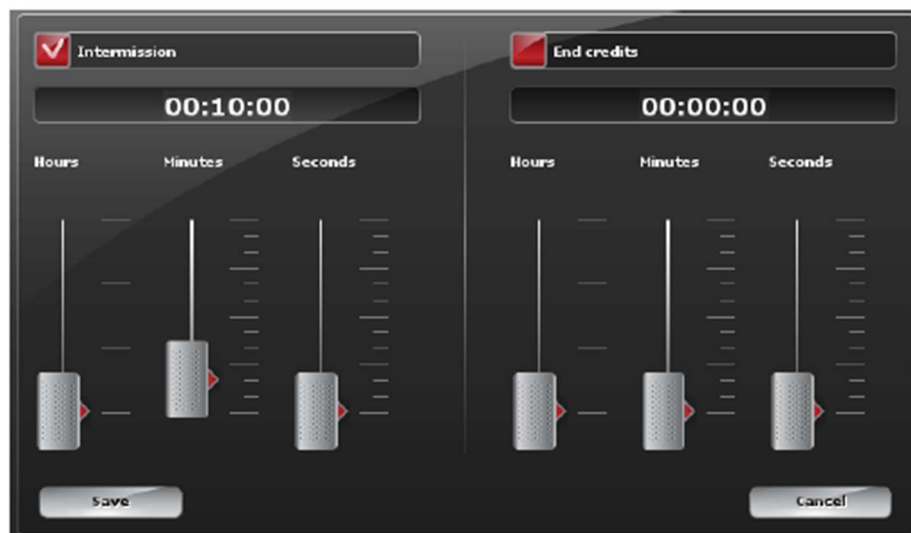


Figure 60 : Set Marker Interval

To set the desired time for an intermission or end credit, manipulate the sliders until the desired interval is displayed in the time field above the sliders.

Note: If you select an interval that is greater than the show time of the content, the interval in the time field is displayed in red.

Click the Save button to apply the interval to the feature. The feature titles are updated to show the markers that you have applied. For example, in Figure 61 the feature FROST-NIXON has an intermission marker of five minutes and the feature GI-JOE an end credit marker of two minutes.

		FROST-NIXON (FTR, Scope 2.39, 2K, 5.1)	02:01:43	00:05:30	00:00:00	
		GI-JOE (FTR, Scope 2.39, 2K, 5.1)	01:57:40	00:00:00	00:02:00	

Figure 61 : Marker Examples

To modify a marker and set a new interval, double click the feature and adjust the slider for the appropriate marker in the Set Marker Interval dialog shown in Figure 60.

To remove a marker, double click the feature and deselect the appropriate marker in the Set Marker Interval dialog shown in Figure 60.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

75. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising the step of notifying an exhibitor, (e.g., when no marker is present, the

“Intermission” and “End Credits” fields are grey) if the no marker corresponding to the cue is present.

7.4 CPL Marking

The CPL marking function lets you keep track of the end credits and intermission time codes associated with a feature. You create a CPL marker for an end credits or intermission after a feature has been successfully ingested into a playlist. Once the marker has been created, an end credits or intermission function cue automatically follows the feature.

To create CPL markers, click the **CPL Markers** tab. The CPL Markers GUI is displayed:

[illegible]

Figure 59 : CPL Markers GUI

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

76. On information and belief, Cinemark directly infringes at least claim 1 of the '544 patent, and is in violation of 35 U.S.C. § 271(a) by using RBTMS.

77. Cinemark's direct infringement has damaged Boulder and caused it to suffer and continue to suffer irreparable harm and damages.

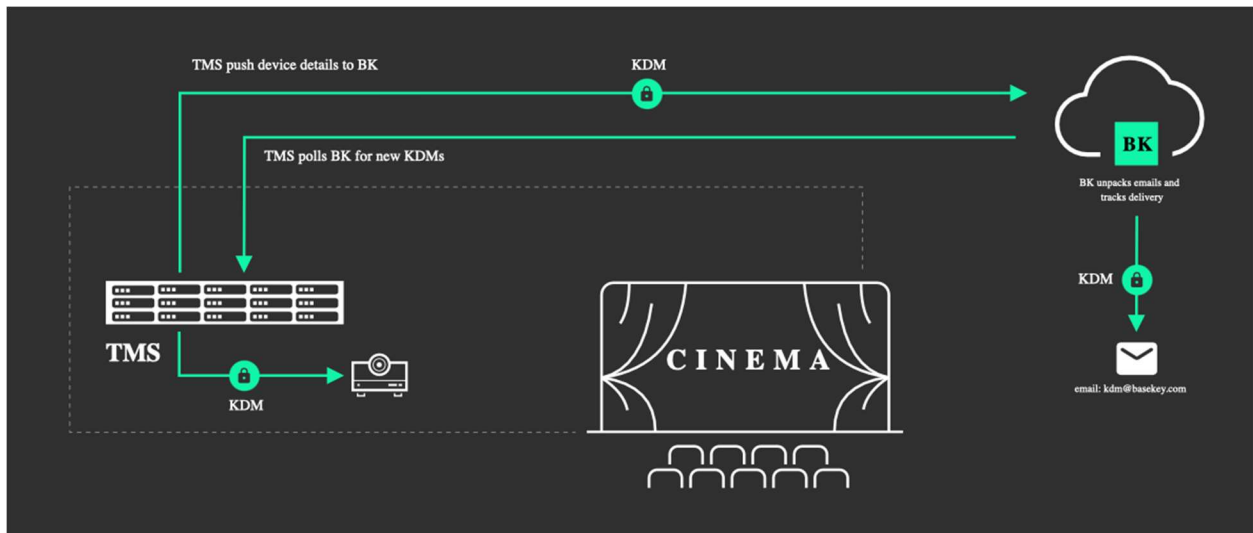
Count IV – Infringement of United States Patent No. 9,002,017

78. Boulder repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

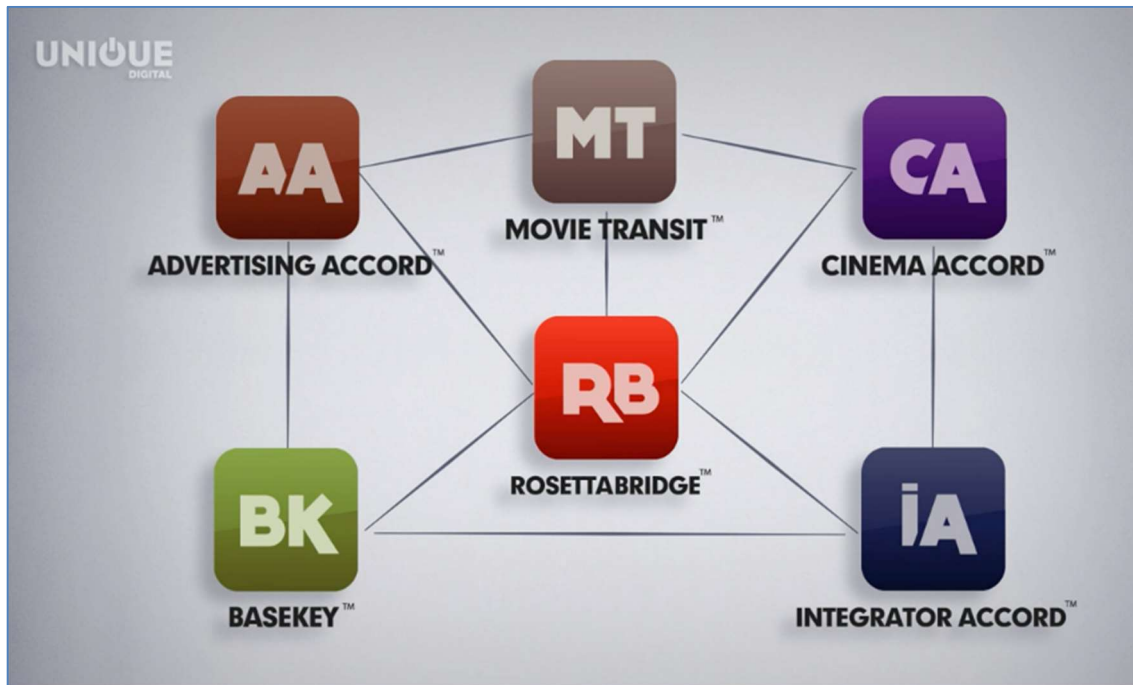
79. On information and belief, Cinemark (or those acting on its behalf) use of RBTMS infringes (literally and/or under the doctrine of equivalents), at least, claim 1 of the '017 patent.

80. On information and belief, Cinemark (or those acting on its behalf) incorporates RBTMS into the digital cinema systems it employs in its movie theaters. Cinemark's making and use of its digital cinema systems which incorporate RBTMS infringe (literally and/or under the doctrine of equivalents), at least, claim 1 of the '017 patent.

81. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark are used in conjunction with BaseKey ("BK") software:



See e.g., <https://uniquex.com/basekey-kdm/>.



See e.g., <https://vimeo.com/44104010>.

82. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method for key management at a digital cinema presentation facility that exhibits digital cinema presentations at scheduled show times.

1.5 Overview

The RosettaBridge Theatre Management System (TMS) is an application that lets you manage and control the operation of an entire theatre. Using a Graphical User Interface, you can construct and schedule playlists to be shown on screen servers, manage Key Delivery Messages (KDMs) to unlock feature films, manage the content of the TMS internal content library, and monitor the auditorium equipment.

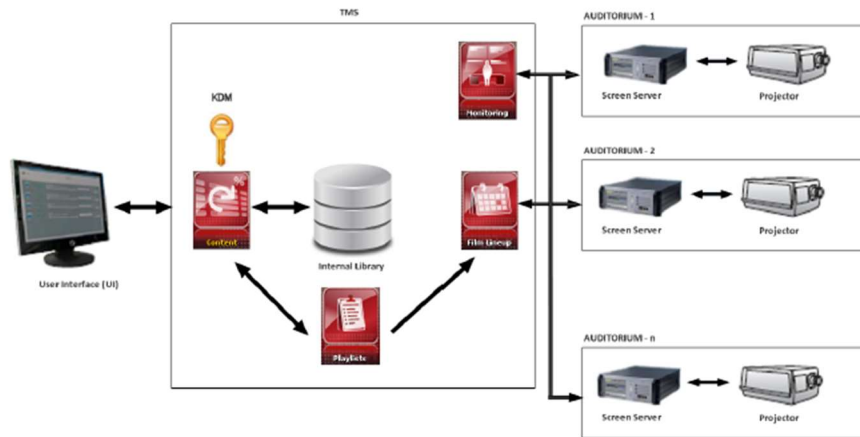


Figure 1 : TMS Overview

The TMS consists of the following main functional areas:

- **Monitoring:** Lets you monitor scheduled playback. Users with the required level of authorization may also take manual control of auditorium devices and modify scheduled playback.
- **Content:** Lets you move films, trailers and other content between external sources, TMS library and the auditorium servers.
- **Playlists:** Lets you build shows of content clips, functions associated with content clips and patterns.
- **Film line-up:** Lets you schedule playlists for showing on auditorium projectors and build advertising and trailer packs for use in playlists.

3.3.3 KDM Widgets

A Key Delivery Message widget provides a security key encrypted within the KDM that allows a player to unlock and show the encrypted content. KDM widgets are coloured orange:



Figure 19 : Function Widget

3.3.3.1 KDM Widget Detail

Figure 20 shows a detail view of the KDM widget associated with the feature DIE-HARD-4 playlist:



Figure 20 : KDM Widget Detail

7.5 KDM Overview

Feature films contain encrypted content can only be shown by auditorium players possessing the required unlocking key. Key Delivery Messages (KDMs) must be ingested into the TMS and

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distributed to the auditorium players to allow the players to unlock and show the encrypted content.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

83. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising evaluating whether at least one key distribution message having a key for

decrypting a digital cinema presentation, is present at a digital cinema presentation system to decrypt the digital cinema presentation.

3.3.3 KDM Widgets

A Key Delivery Message widget provides a security key encrypted within the KDM that allows a player to unlock and show the encrypted content. KDM widgets are coloured orange:



Figure 19 : Function Widget

3.3.3.1 KDM Widget Detail

Figure 20 shows a detail view of the KDM widget associated with the feature DIE-HARD-4 playlist:

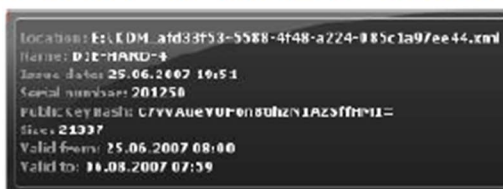


Figure 20 : KDM Widget Detail

You can display additional information about the warning by placing the mouse pointer over the summary to open a text area, for example:

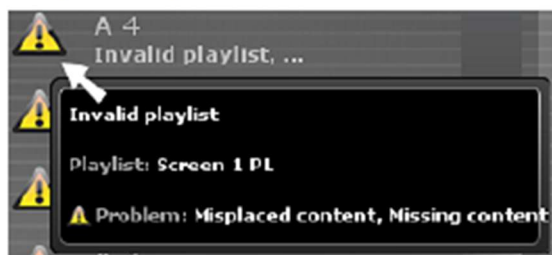


Figure 33 : Monitor Warning Detail

The TMS can raise warnings or errors on every type of object in the TMS such as:

- Playlists that cannot be shown on an auditorium player because the KDM is missing and preventing the feature from being unlocked.

7 *Managing Content*

The Content tab provides functions to let you

- Manage the theatre assets
- Perform transfers
- Create Mappings
- Create CPL markers
- Browse KDM

To manage content, select the Content tab. The functions to manage content are displayed below the Content tab:



Figure 44 Content Function Tabs

7.5 KDM Overview

Feature films contain encrypted content can only be shown by auditorium players possessing the required unlocking key. Key Delivery Messages (KDMs) must be ingested into the TMS and

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distributed to the auditorium players to allow the players to unlock and show the encrypted content.

If a player is found in the KDM authorized device list, the TMS automatically transfers a key to the auditorium player. The feature can then be unlocked by that player, and the player can show the feature.

Unlocking keys are distributed to the auditorium players by the following methods:

- The TMS scans its storage areas for KDMs. For each KDM found, the TMS automatically sends the unlocking key for the feature to the associated auditorium player. This is the usual method, and requires no operator involvement.
- KDMs are manually imported from external media and the unlocking keys are ingested into the auditorium players after the KDM import. This method requires operator intervention and is described in the procedure *Managing KDMs*.

You use the KDM Overview function to view the playlists that the TMS has assigned unlocking keys to, and the auditorium players that are hosting these playlists. The validation period, that is, the period of time that the key is valid for the particular player, is also displayed.

The players with keys are displayed on the KDM Overview tab. The coloured bars represent the validation periods and extend between a start and end date:



Figure 62 : KDM Overview

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

84. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising the step of testing whether the key distribution message determined to be

available to decrypt the digital cinema presentation has a validity interval encompassing a scheduled show time for the digital cinema presentation, if at least one key distribution message having a key for decrypting a digital cinema presentation is present at a digital cinema presentation system to decrypt the digital cinema presentation.

You use the KDM Overview function to view the playlists that the TMS has assigned unlocking keys to, and the auditorium players that are hosting these playlists. The validation period, that is, the period of time that the key is valid for the particular player, is also displayed.

The players with keys are displayed on the KDM Overview tab. The coloured bars represent the validation periods and extend between a start and end date:



Figure 62 : KDM Overview

Each validation period is colour-coded to represent the validity of the key in relation to the authorized player in the following ways:

- Red: The key is valid for less than a day, after which the feature is locked for that player
- Yellow: The key has three days remaining before the expiry of the key
- Green: The player has more than three days remaining before the expiry of the key
- Thin blue line: The period in which the feature has been scheduled in the TMS Film Lineup.

Note: If the blue line exceeds the validation period, a new key must be ordered or the schedule must be changed to ensure that the feature is not locked for that player.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

85. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method

comprising the step of initiating exhibition of the digital cinema presentation at the scheduled show time show time using the key to decrypt the presentation, if at least one key distribution message having a key for decrypting a digital cinema presentation is present at a digital cinema presentation system to decrypt the digital cinema presentation, and the key distribution message has a validity interval encompassing a scheduled show time for the digital cinema presentation.

1.5 Overview

The RosettaBridge Theatre Management System (TMS) is an application that lets you manage and control the operation of an entire theatre. Using a Graphical User Interface, you can construct and schedule playlists to be shown on screen servers, manage Key Delivery Messages (KDMs) to unlock feature films, manage the content of the TMS internal content library, and monitor the auditorium equipment.

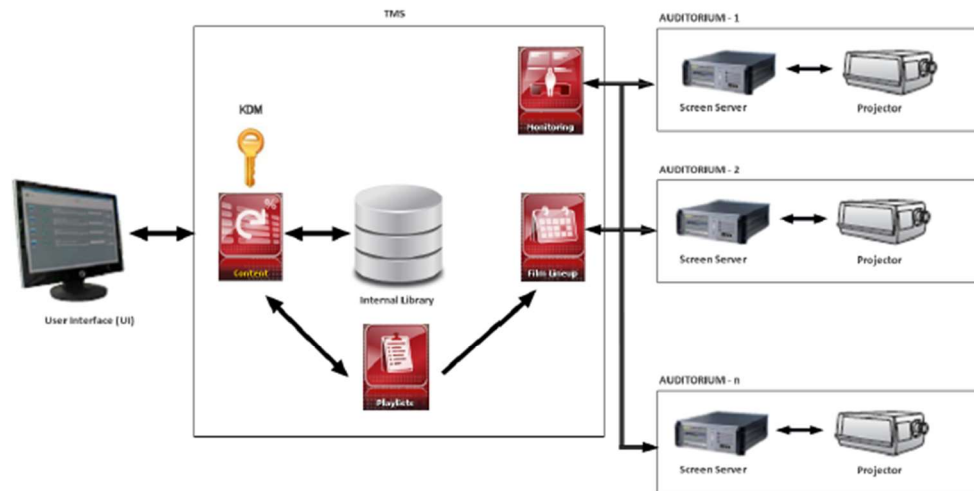


Figure 1 : TMS Overview

The TMS consists of the following main functional areas:

- **Monitoring:** Lets you monitor scheduled playback. Users with the required level of authorization may also take manual control of auditorium devices and modify scheduled playback.
- **Content:** Lets you move films, trailers and other content between external sources, TMS library and the auditorium servers.
- **Playlists:** Lets you build shows of content clips, functions associated with content clips and patterns.
- **Film line-up:** Lets you schedule playlists for showing on auditorium projectors and build advertising and trailer packs for use in playlists.

3.3.3 KDM Widgets

A Key Delivery Message widget provides a security key encrypted within the KDM that allows a player to unlock and show the encrypted content. KDM widgets are coloured orange:



Figure 19 : Function Widget

3.3.3.1 KDM Widget Detail

Figure 20 shows a detail view of the KDM widget associated with the feature DIE-HARD-4 playlist:



Figure 20 : KDM Widget Detail

7.5 KDM Overview

Feature films contain encrypted content can only be shown by auditorium players possessing the required unlocking key. Key Delivery Messages (KDMs) must be ingested into the TMS and

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distributed to the auditorium players to allow the players to unlock and show the encrypted content.

If a player is found in the KDM authorized device list, the TMS automatically transfers a key to the auditorium player. The feature can then be unlocked by that player, and the player can show the feature.

Unlocking keys are distributed to the auditorium players by the following methods:

- The TMS scans its storage areas for KDMs. For each KDM found, the TMS automatically sends the unlocking key for the feature to the associated auditorium player. This is the usual method, and requires no operator involvement.
- KDMs are manually imported from external media and the unlocking keys are ingested into the auditorium players after the KDM import. This method requires operator intervention and is described in the procedure *Managing KDMs*.

You use the KDM Overview function to view the playlists that the TMS has assigned unlocking keys to, and the auditorium players that are hosting these playlists. The validation period, that is, the period of time that the key is valid for the particular player, is also displayed.

The players with keys are displayed on the KDM Overview tab. The coloured bars represent the validation periods and extend between a start and end date:



Figure 62 : KDM Overview

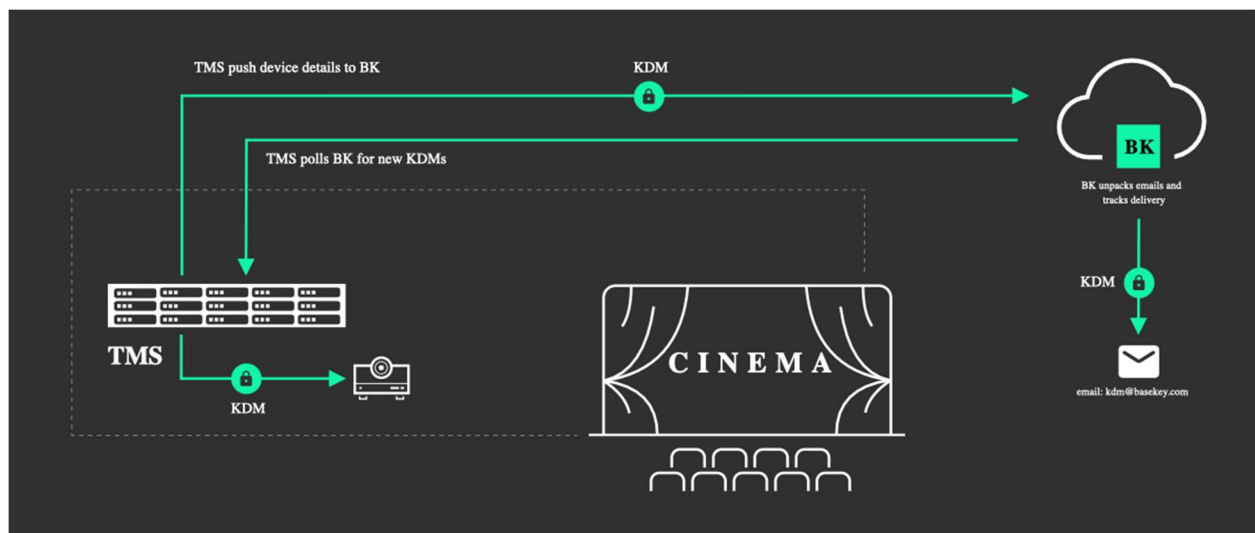
Each validation period is colour-coded to represent the validity of the key in relation to the authorized player in the following ways:

- Red: The key is valid for less than a day, after which the feature is locked for that player
- Yellow: The key has three days remaining before the expiry of the key
- Green: The player has more than three days remaining before the expiry of the key
- Thin blue line: The period in which the feature has been scheduled in the TMS Film Lineup.

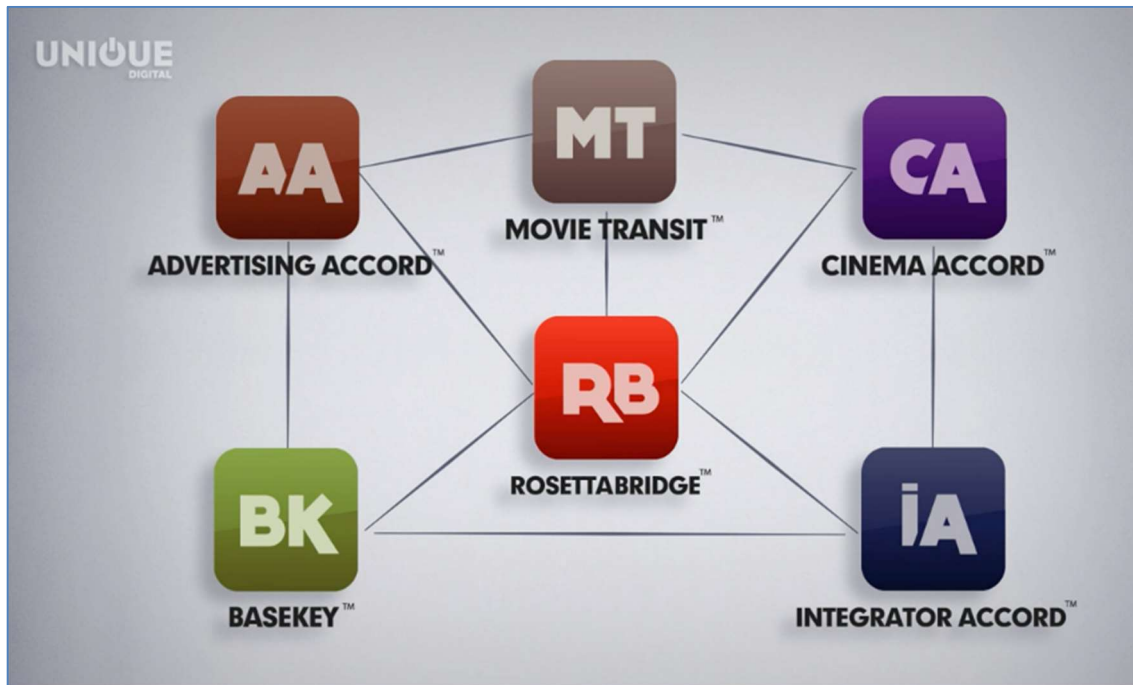
Note: If the blue line exceeds the validation period, a new key must be ordered or the schedule must be changed to ensure that the feature is not locked for that player.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.



<https://uniquex.com/basekey-kdm/>.



See e.g., <https://vimeo.com/44104010>.

86. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising the step of obtaining an alternate key distribution message, if at least one key distribution message having a key for decrypting a digital cinema presentation is present at a digital cinema presentation system to decrypt the digital cinema presentation, and the key distribution message doesn't have a validity interval encompassing a scheduled show time for the digital cinema presentation.

7.5 KDM Overview

Feature films contain encrypted content can only be shown by auditorium players possessing the required unlocking key. Key Delivery Messages (KDMs) must be ingested into the TMS and

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distributed to the auditorium players to allow the players to unlock and show the encrypted content.

If a player is found in the KDM authorized device list, the TMS automatically transfers a key to the auditorium player. The feature can then be unlocked by that player, and the player can show the feature.

Unlocking keys are distributed to the auditorium players by the following methods:

- The TMS scans its storage areas for KDMs. For each KDM found, the TMS automatically sends the unlocking key for the feature to the associated auditorium player. This is the usual method, and requires no operator involvement.
- KDMs are manually imported from external media and the unlocking keys are ingested into the auditorium players after the KDM import. This method requires operator intervention and is described in the procedure *Managing KDMs*.

You use the KDM Overview function to view the playlists that the TMS has assigned unlocking keys to, and the auditorium players that are hosting these playlists. The validation period, that is, the period of time that the key is valid for the particular player, is also displayed.

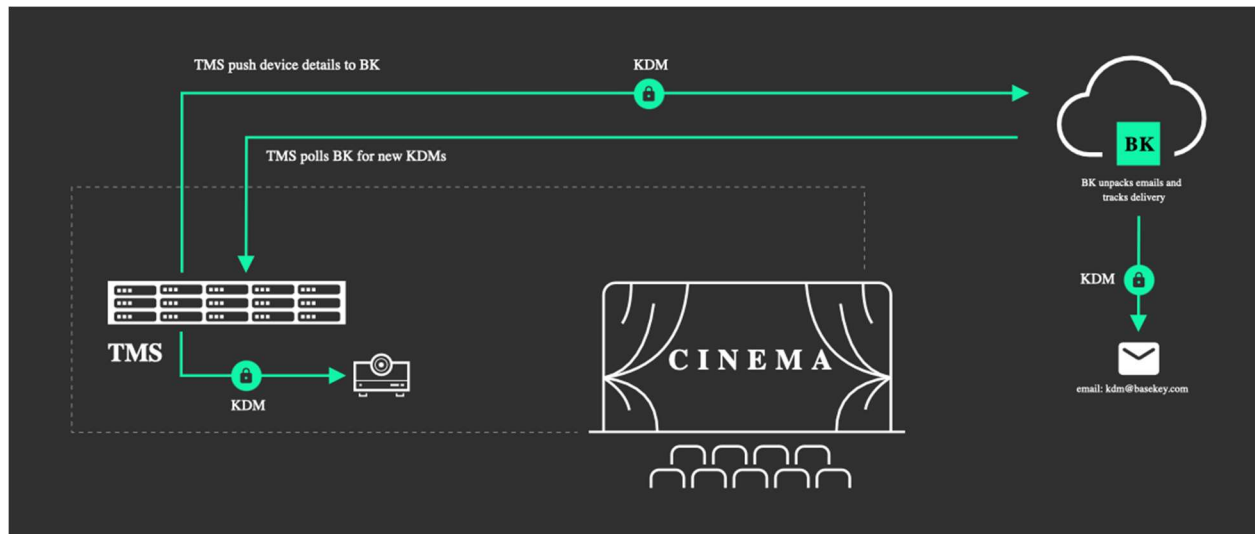
The players with keys are displayed on the KDM Overview tab. The coloured bars represent the validation periods and extend between a start and end date:



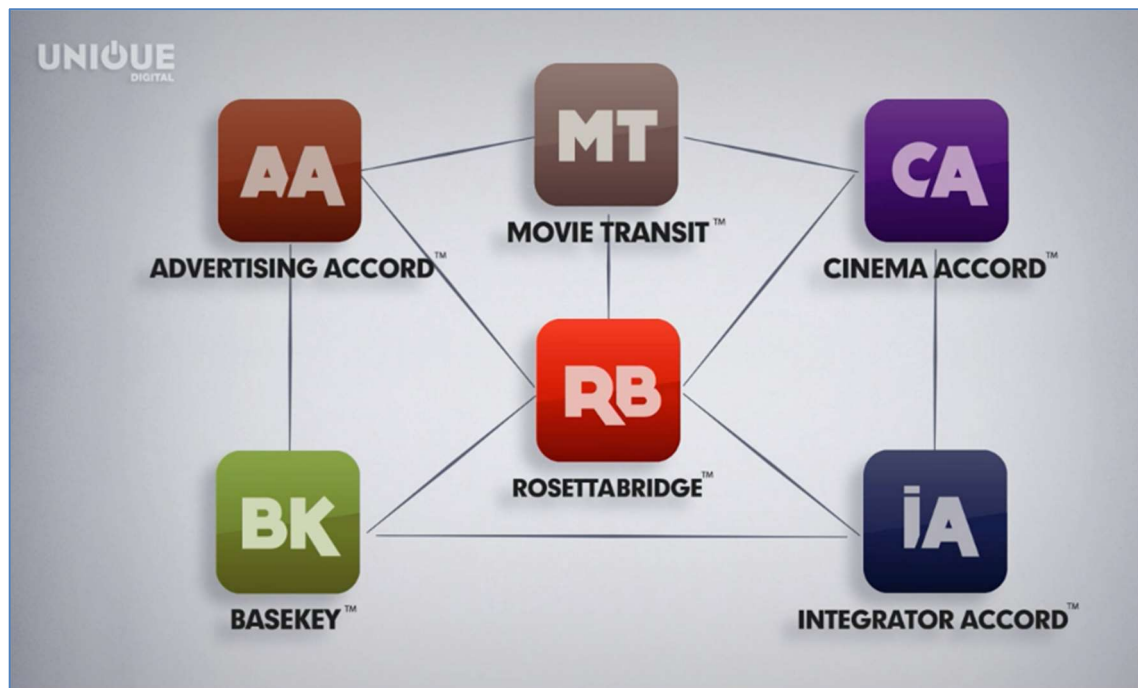
Figure 62 : KDM Overview

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.



See e.g., <https://uniquex.com/basekey-kdm/>.



See e.g., <https://vimeo.com/44104010>.

87. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising the step of checking for expiration of the alternate key distribution message

if at least one key distribution message having a key for decrypting a digital cinema presentation is present at a digital cinema presentation system to decrypt the digital cinema presentation, and the key distribution message doesn't have a validity interval encompassing a scheduled show time for the digital cinema presentation.

7.5 KDM Overview

Feature films contain encrypted content can only be shown by auditorium players possessing the required unlocking key. Key Delivery Messages (KDMs) must be ingested into the TMS and

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If a player is found in the KDM authorized device list, the TMS automatically transfers a key to the auditorium player. The feature can then be unlocked by that player, and the player can show the feature.

Unlocking keys are distributed to the auditorium players by the following methods:

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The players with keys are displayed on the KDM Overview tab. The coloured bars represent the validation periods and extend between a start and end date:



Figure 62 : KDM Overview

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

88. On information and belief, the digital cinema systems incorporating RBTMS, which are made and used by Cinemark, employ and provide a method comprising the step of retaining the alternate key distribution message when not expired, if at least one key distribution message having a key for decrypting a digital cinema presentation is present at a digital cinema presentation system to decrypt the digital cinema presentation, and the key distribution message doesn't have a validity interval encompassing a scheduled show time for the digital cinema presentation.

1.5 Overview

The RosettaBridge Theatre Management System (TMS) is an application that lets you manage and control the operation of an entire theatre. Using a Graphical User Interface, you can construct and schedule playlists to be shown on screen servers, manage Key Delivery Messages (KDMs) to unlock feature films, manage the content of the TMS internal content library, and monitor the auditorium equipment.

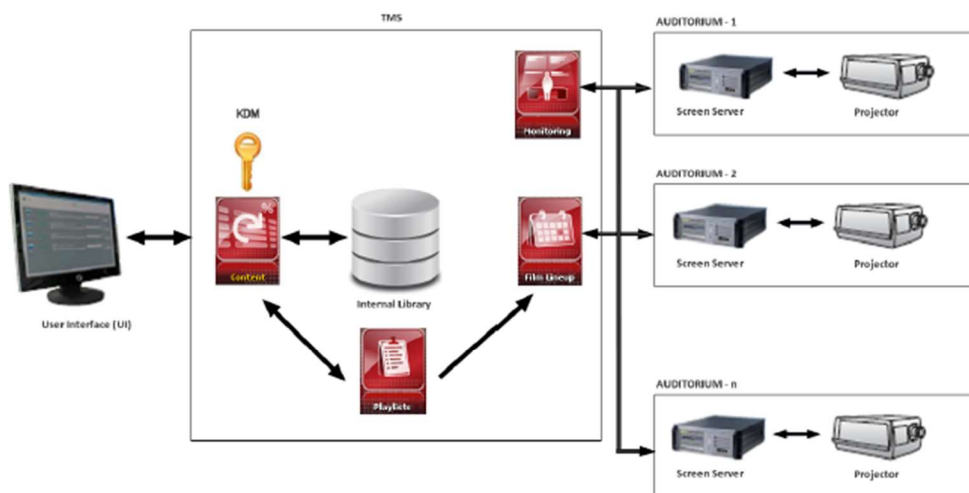


Figure 1 : TMS Overview

The TMS consists of the following main functional areas:

- **Monitoring:** Lets you monitor scheduled playback. Users with the required level of authorization may also take manual control of auditorium devices and modify scheduled playback.
- **Content:** Lets you move films, trailers and other content between external sources, TMS library and the auditorium servers.
- **Playlists:** Lets you build shows of content clips, functions associated with content clips and patterns.
- **Film line-up:** Lets you schedule playlists for showing on auditorium projectors and build advertising and trailer packs for use in playlists.

7.5 KDM Overview

Feature films contain encrypted content can only be shown by auditorium players possessing the required unlocking key. Key Delivery Messages (KDMs) must be ingested into the TMS and

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distributed to the auditorium players to allow the players to unlock and show the encrypted content.

If a player is found in the KDM authorized device list, the TMS automatically transfers a key to the auditorium player. The feature can then be unlocked by that player, and the player can show the feature.

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The players with keys are displayed on the KDM Overview tab. The coloured bars represent the validation periods and extend between a start and end date:



Figure 62 : KDM Overview

Each validation period is colour-coded to represent the validity of the key in relation to the authorized player in the following ways:

- Red: The key is valid for less than a day, after which the feature is locked for that player
- Yellow: The key has three days remaining before the expiry of the key
- Green: The player has more than three days remaining before the expiry of the key
- Thin blue line: The period in which the feature has been scheduled in the TMS Film Lineup.

Note: If the blue line exceeds the validation period, a new key must be ordered or the schedule must be changed to ensure that the feature is not locked for that player.

See e.g.,

http://outty.org/Cinema/Servers/Unique/RosettaBridge/RosettaBridge_TMS%20User%20Guide.pdf.

89. On information and belief, Cinemark directly infringes at least claim 1 of the '017 patent, and is in violation of 35 U.S.C. § 271(a) by using RBTMS.

90. Cinemark's direct infringement has damaged Boulder and caused it to suffer and continue to suffer irreparable harm and damages.

JURY DEMANDED

91. Pursuant to Federal Rule of Civil Procedure 38(b), Boulder hereby requests a trial by jury on all issues so triable.

PRAYER FOR RELIEF

Boulder respectfully requests this Court to enter judgment in Boulder's favor and against Cinemark as follows:

- a. finding that Cinemark has infringed one or more claims of the '033 patent under 35 U.S.C. §§ 271(a);

- b. finding that Cinemark has infringed one or more claims of the '751 patent under 35 U.S.C. §§ 271(a);
- c. finding that Cinemark has infringed one or more claims of the '544 patent under 35 U.S.C. §§ 271(a);
- d. finding that Cinemark has infringed one or more claims of the '017 patent under 35 U.S.C. §§ 271(a);
- e. awarding Boulder damages under 35 U.S.C. § 284, or otherwise permitted by law, including supplemental damages for any continued post-verdict infringement;
- f. awarding Boulder pre-judgment and post-judgment interest on the damages award and costs;
- g. awarding cost of this action (including all disbursements) and attorney fees pursuant to 35 U.S.C. § 285, or as otherwise permitted by the law; and
- h. awarding such other costs and further relief that the Court determines to be just and equitable.

Dated: October 28, 2021

Respectfully submitted,

/s/ Raymond W. Mort, III
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